MADURAI KAMARAJ UNIVERSITY

(University with Potential for Excellence)

B.A.,
SOCIAL WORK
SECOND YEAR

PSYCHOLOGY FOR SOCIAL WORKERS - (ALLIED)

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Unit – 1

PLAN OF THE STUDY

1.0 Aims and Objectives
1.1 Introduction
1.2 Meaning of Psychology
    1.2.1 Definition
    1.2.2 Development of Psychology
    1.2.3 School of Thoughts
1.3 Scope of Psychology
1.4 Branches of Psychology
1.5 Importance of psychology to Social Work
1.6 Let us sum up
1.7 Lesson-End activities
1.8 Model Questions
1.9 Check your progress
1.10 Suggested Reading

1.0 Aims and Objectives

In this Unit the nature and scope of psychology as a discipline will be discussed. After going through this lesson you will be able to

i) gain an understanding Psychology as a discipline

ii) understand the vast scope of psychology

iii) appreciate the nature of sub fields of psychology

iv) the type of work various psychologists are doing in their sub fields.

1.1 Introduction

Understanding human being and their behaviours is always an interesting topic for many in this world. A few of them go little deeper to make prediction and do analysis on behaviours. Science had made humans a rational animal, who question thing around them. In a sense all humans are scientists. We all have an interest in asking and answering questions about our world. We want to know why things happen, when and if they are likely to happen again, and how to reproduce or change them. Such knowledge enables us to become "everyday" researcher.

The results of these "everyday" research teach us many principles of human behaviour. We learn that people may become depressed after they fail at an important task. We see that aggressive behaviour occurs frequently in our society. These insights are part of everyday social life. Unfortunately, the way we collect, analyse and interpret data in our everyday lives is not always scientific. Researchers have found that there are a variety of biases that can influence our perceptions. These biases lead us to draw faulty conclusions. In addition, most individuals listen to people they know and trust to give them accurate information rather than doing research to determine what scientific studies show. To answer these questions on human behaviour, Psychology as a discipline of Science tries to use scientific methods to collect, analyse and interpret information.

1.2 Meaning of Psychology

The word "psychology" comes from the Greek words "psyche," meaning life, and "logos," meaning "knowledge or study." Psychologists try to describe, predict, and explain human behaviour and mental processes, as well as helping to change and improve the lives of people and the world in which they live. They use scientific methods to find answers that are far more valid and legitimate than those resulting from intuition and speculation, which are often inaccurate.

1.2.1 Definition

Psychology is the scientific study of behaviour and mind (mental processes).

Scientific Method

The scientific method consists of the orderly, systematic procedures that researchers follow as they identify a research problem, design a study to investigate the problem, collect and analyze data, draw conclusions, and communicate their findings. Psychologists rely on scientific observation, which is also based on gathering **empirical evidence** (information gained from direct observation). However, unlike our everyday personal experiences, scientific observation is systematic, or carefully planned. Scientific observations are also intersubjective, which means they can be confirmed by more than one observer.

Studying Behaviour

Anything you do—eating, sleeping, talking, or sneezing—is behaviour. So are studying, watching television, tying your shoes, giving someone a gift, learning keyboard and reading this book. Naturally, we are interested in **overt behaviours** (directly observable actions and responses) like these.

Studying the mind

The mind is highly complex and enigmatic. Many wonder how psychologists can study such an intricate, seemingly abstract and extremely sophisticated thing. Even if scientists look inside the brain, as in an autopsy or during a surgical operation, all they see is gray matter (the brain). Thoughts, cognition, emotions, memories, dreams, perceptions, etc. cannot be seen physically but psychologists also study these behaviours called as **covert behaviours**.

The Goals of Psychology

- *Description:* Identifying and classifying behaviours and mental processes as accurately as possible (What is the nature of this behaviour?)

- *Explanation:* Proposing reasons for behaviours and mental processes (Why does it occur?)
- *Prediction:* Offering predictions (or hypotheses) about how a given condition or set of conditions will affect behaviours and mental processes (Can we forecast when it will occur?)
- *Influence:* Using the results of research to solve practical problems that involve behaviour and mental processes (What conditions affect it?)

Psychology as a subject of study is mainly concerned with the following:

- Activities that generate knowledge, e.g. seeing, thinking, perception.
- Emotion related issues, e.g. Laughter, crying, wellness, and feeling.
- Interpersonal relationships among individuals.
- Individual differences and personality.
- Human resource management and utilization, motivation, and personnel selection/placement.
- Normal/Abnormal behaviour (psychological treatment, testing, treatment and rehabilitation.
- Guidance and counselling services to communities (e .g in schools, mental institutions, careers and educational, orientation, and adaptation).

- Measurement and Evaluation of behaviour (e.g. testing and grading of learners, promotion and validation of programs).

1.2.2 Development of Psychology:

It is also important at this juncture to have a look at the origin, development of Psychology over a period of time, until it has assumed a status of scientific discipline today. If you were to trace the development of psychology from the beginning, you would need to start before the earliest pages of recorded history, beyond even the early Greek philosophers, such as Aristotle and Plato. Psychology became distinct from philosophy when researchers began to use the scientific method to study behaviour and mental processes.

Psychology as a medical discipline can be seen in Thomas Willis' reference to psychology (the "Doctrine of the Soul") in terms of brain function, as part of his 1672 anatomical treatise "De Anima Brutorum". Until about the end of the 19th century, psychology was regarded as a branch of philosophy.

In 1879, Wilhelm Wundt (1832-1920), known as "the father of psychology", founded a laboratory for the study of psychology at Leipzig University in Germany. The American philosopher William James published his seminal book, Principles of Psychology, in 1890, laying the foundations for many of the questions that psychologists would focus on for years to come.

By the 1920s, the field's earliest researchers had laid the foundations of the major schools of thought and psychological perspectives that exist in psychology today. As the field grew and research findings accumulated, specialty areas within the field began to follow distinctive pathways.

1.2.3 School of Thoughts (Approaches) in Psychology:

- **Structuralism** - Uses the method of introspection to identify the basic elements or "structures" of psychological experience (Contributors: Wilhelm Wundt, Edward B. Titchener)

- **Functionalism** - Attempts to understand why animals and humans have developed the particular psychological aspects that they currently possess (*Evolutionary perspective*) (Contributor: William James)

- **Psychodynamic** - Focuses on the role of our unconscious thoughts, feelings, and memories and our early childhood experiences in determining behaviour (Contributors: Sigmund Freud, Carl Jung, Alfred Adler, Erik Erickson)

- **Behaviourism** - Based on the premise that it is not possible to objectively study the mind, and therefore that psychologists should limit their attention to the study of behaviour itself (Environmental factors) (Contributors: John B. Watson, B. F. Skinner)

- **Cognitive** - focuses on mental processes, including perception, thinking, memory, and judgments (Contributors: Hermann Ebbinghaus, Sir Frederic Bartlett, Jean Piaget)

- **Social-cultural** – focuses on how the social situations and the cultures in which people find themselves influence thinking and behaviour (Contributors: Fritz Heider, Leon Festinger, Stanley Schachter)

- **Humanistic** - focuses on the uniqueness of human beings and their capacity for choice, growth, and psychological health (Subjective experiences, intrinsic motivation to achieve self-actualization) (Contributors: Abraham Maslow, Carl Rogers)

1.3 Scope of Psychology.

Psychology is both an applied and academic field that studies the human mind and behaviour. Research in psychology seeks to understand and explain how we think, act and feel. As most people already realize, a large part of psychology is devoted to the diagnosis and treatment of mental health issues, but that's just the tip of the iceberg when it comes to applications for psychology. In addition to mental health, some psychologists do research to discover new knowledge. Others apply psychology to solve problems in fields such as mental health, business, education, sports, law, medicine, and the design of machines.

Psychology studies all sorts of individuals, from mentally retarded to genius, from mentally ill to people who are self-actualizing. The spectrum of phenomena of interest to psychologists include everything from egotism to altruism, from truancy, delinquency, criminality, psychopath to spiritualism, from peace to violence, terrorism and war, from behaviour of plants to that of animals and human beings, and what not? It is not surprising that modern psychology has been some times commented to be a psychotic octopus that stretches and catches every thing that comes across it by its innumerous ever lengthening limbs.

1.4 Branches of psychology

Clinical psychology

Clinical psychology integrates science, theory, and practice in order to understand, predict and relieve maladjustment, disability, and discomfort. Clinical psychology also promotes adaption, adjustment and personal development. A clinical psychologist concentrates on the intellectual, emotional, biological, psychological, social, and behavioural aspects of human performance throughout a person's life, across varying cultures and socioeconomic levels. In other words, clinical psychology is the scientific study and application of psychology in order to understand, prevent, and

alleviate psychologically-caused distress or dysfunction (disability) and promote the patient's well-being and personal development.

Cognitive psychology

Cognitive psychology investigates internal mental processes, such as problem solving, memory, learning, and language (how people think, perceive, communicate, remember and learn). This branch of psychology is closely related to other disciplines, such as neuroscience, philosophy and linguistics. At the center of cognitive psychology is how people acquire, process and store information. Many say that cognitive psychology is the study of intelligence. Practical applications for cognitive research may include how to improve memory, increase the accuracy of decision-making, or how to set up educational programs to boost learning.

Developmental psychology

Developmental psychology is the scientific study of systematic psychological changes that a person experiences over the course of his/her life span. Developmental psychology is often referred to as human development. It used to just focus on infants and young children, but also includes teenagers and adults today - the whole human life span. Developmental psychology includes any psychological factor that is studied over the life of a person, including motor skills, problem solving, moral understanding, acquiring language, emotions, personality, self-concept and identity formation.

Evolutionary psychology

Evolutionary psychology looks at how human behaviour has been affected by psychological adjustments during evolution. Just as biologists talk about natural selection or sexual selection during evolution, this branch of psychology applies psychology to the same way of thinking. An evolutionary psychologist believes, for example, that language or memory perception are functional products of natural selection. An evolutionary psychologist believes that our human psychological traits are adaptations for survival in the everyday environment of our ancestors.

Health psychology

Health psychology is also called behavioural medicine or medical psychology. This branch observes how behaviour, biology and social context influence illness and health. While a doctor treats the illness, the health psychologist will focus more on the person who has the illness, by finding out about their socioeconomic status and background, behaviours that may have an impact on the disease (such as medication compliance), plus the biological reasons for the illness. The aim of the health psychologist is to improve the patient's overall health by analyzing disease in the context of biopsychosocial factors. Biopsychosocial refers to the biological, psychological, and social aspects in contrast to the strictly biomedical aspects of disease.

Neuropsychology

Studies the structure and function of the brain in relation to clear behaviours and psychological processes. Neuropsychology is also involved in lesion studies in the brain, as well as recording electrical activity from cells and groups of cells in higher primates, including some human studies.

Occupational psychology

Occupational psychology, also known as industrial-organizational psychology, I-O psychology, work psychology, organizational psychology, work and organizational psychology, occupational psychology, personnel psychology or talent assessment - studies the performance of people at work and in training, develops an understanding of how organizations function and how people and groups behave at work. The occupational psychologist aims to increase effectiveness, efficiency, and satisfaction at work.

Social psychology

Social psychology uses scientific methods to understand and explain how feeling, behaviour and thoughts of people are influenced by the actual, imagined or implied presence of other people. A social psychologist will look at group behaviour, social perception, non-verbal behaviour, conformity,

aggression, prejudice, and leadership. Social perception and social interaction are seen as key to understanding social behaviour.

Personality psychology

This is the branch of psychology that focuses on individual differences is called. Both consistency in an individual's behaviour and the changes occurring in him over time are points of interest to personality psychologists. In addition to this they try to understand how one individual is different from the other given the same situation, there by highlighting the uniqueness of the person.

Sports psychology

Sports psychology studies the psychological aspects of sports behaviour. The goal is to understand the psychological factors that influence performance in sports, including the role of exercise and team interactions.

Social and cross-cultural psychology

Cross-cultural psychology is a branch of psychology that deals with investigating the similarities and differences in psychological functioning among various cultural and ethnic groups. This branch focuses on issues like how child-rearing practices differ with regard to different cultures, what are the factors affecting the achievement of women in different cultures, and why do cultures vary in their standards for physical attractiveness. Contemporary psychology invests a lot on studying the cultural diversity of virtually every psychological phenomenon.

Environmental psychology:

Environmental psychology is a field of psychology that studies the relationship between people and their physical environment. They study the effect of neighbourhood, crowding, pollution and other environmental factors on psychological factors like our social behaviour, our emotions, perception of stress and even the way we think.

School and educational psychology

This field studies how people learn in school, the effectiveness of school programs, and the psychology of teaching.

Forensic psychology

Forensic psychology involves applying psychology to criminal investigation and the law. A forensic psychologist practices psychology as a science within the criminal justice system and civil courts. Forensic psychology involves understanding criminal law in the relevant jurisdictions in order to interact with judges, lawyers and other professionals of the legal system. Forensic psychology involves the ability to testify in court, to present psychological findings in legal language to the courtroom, and to provide data to legal professionals in a clear way. A forensic psychologist needs to understand the rules, standards, and philosophy of his/her country's judicial system.

1.5 Importance of Psychology to Social Work

Social Work practice seeks the help of psychology to understand and analyse human behaviour. When a social worker makes an effort to bring about a change in individual, he/she has to look for help from psychology. In resolving problems related to adjustment, psychology helps social work profession. The method of social case work of social work profession is dependent on psychology. Group work derives many social, psychological elements to be used in practice for group strengthening and betterment, from psychology. Social psychology studies group morale, leadership qualities and traits, behaviours of crowds and audiences which are useful in group work and to some extent, in community organisation. Psychology help social workers

1. To understand themselves so that we can make life happy and successful.
2. It gives knowledge and understanding about others for better social relations.

3. Helps us to solve our personal problems and difficulties and thus achieve better mental health and efficiency.

4. In the field of social work, education, medicine, industry social affairs and in all other aspects of life psychology gives special concern to influence and change the behaviour of people in definite direction for the purpose of attaining specific ends..

5. To sociologists and to social reformers psychology provides principles and methods of changing attitudes and thereby creating social change

The study of the psychology helps to work on relationship has many implications for social work practice:

- Help clients identify their sources of stress and patterns of coping. Recognize the possibility of particular vulnerabilities to stress, and to social and environmental conditions that give rise to stress.
- Help clients assess the effectiveness of particular coping strategies for specific situations.
- Be alert to the possibility that practice interventions may need to focus on any of several systems, including family, small groups, organizations, and communities. The person's transactions with all of these systems affect psychological functioning.
- Where appropriate, help individual clients to develop a stronger sense of competence through both ego-supportive and ego-modifying interventions.
- Where appropriate, help individual clients to enhance problem-solving skills through techniques directed at both cognitive reorganization and behavioural change.
- Where appropriate, help individual clients strengthen the sense of self by bringing balance to emotional and cognitive experiences.
- Help clients consider their strengths in terms of the unique sets of intelligences they may have, and show how these intelligences may help them address their challenges in unique ways.

- Always assess the nature, range, and intensity of a client's interpersonal relationships.
- Where appropriate, use case management activities focused on developing a client's social supports through linkages with potentially supportive others in a variety of social network clusters.
- When working with persons in crisis, attempt to alleviate distress and facilitate a return to the previous level of functioning.

1.6 Let us sum up

- The first psychologists were philosophers, but the field became more empirical and objective as more sophisticated scientific approaches were developed and employed.
- Psychology is the scientific study of mind and behaviour.
- Though it is easy to think that everyday situations have commonsense answers, scientific studies have found that people are not always as good at predicting outcomes as they think they are.
- The structuralists attempted to analyze the nature of consciousness using introspection.
- The behaviourists explained behaviour in terms of stimulus, response, and reinforcement, while denying the presence of free will.
- Cognitive psychologists study how people perceive, process, and remember information.
- Psychodynamic psychology focuses on unconscious drives and the potential to improve lives through psychoanalysis and psychotherapy.
- The social-cultural approach focuses on the social situation, including how cultures and social norms influence our behaviour.
- Psychiatry, counselling and social work are professions related to psychology.

1.7 Lesson-End activities

In the group you have formed, brainstorm together on the following: The relationships between Psychology and Social Work. (Since this is a group activity, it is important to have a member as a moderator, and another person as a recorder to write down contributions from colleagues. It is also important that each member contributing endeavours to support his/her points with concrete examples).

1.8 Model Questions

1. What is the scientific method?
2. What is the science of psychology?
3. What are the major specialties in the field of psychology?
4. Where do psychologists work?
5. What are the origins of psychology?
6. What are the major approaches in contemporary psychology?

1.9 Check your progress

1. Psychology as a discipline of Science tries to use scientific methods to ________________, ___________ and _____________

2. The four goals of psychology are ________________, ________________, ____________________, and ____________________.

3. American psychologist ________________ was an advocate of functionalism.

4. The major emphasis of ______________ is the study of the unconscious.

5. The _____________ school of thought focuses on mental processes such as memory and problem solving.

6. The ______________ perspective emphasizes the role of social and cultural variables in explanations of individual behaviour.

7. ________________ psychologists specialize in the diagnosis and treatment of psychological disorders.

Answers : 1. collect, analyse, interpret information. 2. Description, Explanation, Prediction and influence 3. William James 4.psycho dynamic perspective 5.cognitive 6. Socio-cultural 7. Clinical

1.1C Suggested Reading

1. James, W. (1890). The principles of psychology. New York, NY: Dover.
2. Passer, M.W. and Smith, R.E. (2007). Psychology The Science of Mind and Behaviour. Third Edition. Delhi: Tata McGraw Hill.
3. Coon, D. and Mitterer, J.O. (2007). Introduction to Psychology. First Indian Reprint. Delhi. Akash Press.

Unit – II

PLAN OF THE STUDY

2.0 Aims and Objectives

2.1 Introduction

2.2 Developmental Psychology

  2.2.1 Definition

  2.2.2 Growth and development.

2.3 Prenatal Development Conception to Birth

2.4 Delivery

2.5 Developmental Task: Infancy to Old age

2.6 Let us sum up

2.7 Lesson-End activities

2.8 Model Questions

2.9 Check your progress

2.10 Suggested Reading

2.0 Aims and Objectives

In this Unit the Developmental Psychology as a discipline will be discussed. After going through this lesson you will be able to

- Understand the different meanings of development
- Differentiate between growth and development.
- Explain the principles of growth and development.
- Explore the process of conception, pregnancy and delivery
- Describe the characteristics of each stage of human growth and development.

2.1 Introduction

Human beings keep changing. During their lives, they change in size, appearance and psychological makeup. The way they change differs from individual to individual. However, the fundamental underlying patterns of growth and development remain more or less the same and take place in an orderly way. Each individual, with his unique heredity and the way he is nurtured, determines the way he traverses the broad highway of his life at his rate of progress. He will attain the size, shape, capacities and developmental status in a way, which is peculiar to him at each stages of life. In this unit, we shall discuss the concept, principles and various stages of growth & development. Children differ in physical, cognitive, social, and emotional growth patterns. They also differ in the ways they interact with and respond to their environment as well as play, affection. Having an understanding of the sequence of growth and development prepares teachers to help and give attention to all the children.

2.2 Developmental Psychology

Life-span developmental psychology is the field of psychology which involves the examination of both constancy and change in human behaviour across the entire life span, that is, from conception to death Developmental psychologists are concerned with diverse issues ranging from the growth of motor skills in the infant, to the gains and losses observed in the intellectual functioning of the elderly. The goal of study in developmental psychology is to further our knowledge about how development evolves over the entire life span, developing a knowledge of the general principles of development and the differences and similarities in development across individuals.

2.2.1 Concept of Growth and Development

The terms growth and development are often used interchangeably. Actually, they are conceptually different. Neither growth nor development takes place all by itself.

Growth refers to quantitative changes in size, which include physical changes in height, weight, size, internal organs, etc. As an individual develops, old features like baby fat, hair and teeth, etc., disappear and new features like facial hair are acquired. When maturity comes, the second set of teeth, primary and secondary sex characteristics, etc., appear. Similar changes occur in all aspects of the personality. During infancy and childhood, the body steadily becomes larger, taller and heavier. To designate this change the term growth is used. Growth involves changes in body proportions as well as in overall stature and weight. The term growth thus indicates an increase in bodily dimensions. However, the rate of growth differs from one part of the body to the other.

Development, by contrast, refers to qualitative change taking place simultaneously with quantitative changes of growth. It may be defined as a progressive series of orderly, coherent changes. The term progressive signifies that changes are directional, that they lead forward rather than backward. Orderly and coherent suggest that a definite relationship between the changes taking place and those that precede or will follow them. Development represents changes in an organism from its origin to its death, but more particularly the progressive changes that take place from origin to maturity. Thus, development may be explained as the series of overall changes in an individual due to the emergence of modified structures and functions that are the

2.2.2 The Principles of Growth and Development

(i) Development follows a pattern or a sequence:

Development tends to proceed from the head downward. This is called the **cephalocaudal principle.** According to this principle, the child first gains control of the head, then the arms, then the legs. Infants gain control of head and face movements within ıe first two months after birth. In the next few months, they are able to lift themselves up using their arms. By 6 to 12 months of age, infants start to gain leg control and may be able to crawl, stand, or

walk. Development also proceeds from the center of the body outward according to the **proximodistal principle**. Accordingly, the spinal cord develops before other parts of the body. The child's arms develop before the hands, and the hands and feet develop before the fingers and toes. Fingers and toes are the last to develop.

(ii) Development proceeds from general to specific responses:

It moves from a generalized to localized behaviour. The newborn infant moves its whole body at one time instead of moving only one part of it. It makes random kicking with its legs before it can coordinate the leg muscles well enough to crawl or to walk.

(iii) Development is a continuous process:

Development does not occur in spurts. Growth continues from the moments of conception until the individual reaches maturity. It takes place at slow regular pace rather than by 'leaps
and bounds'. Although development is a continuous process, yet the tempo of growth is not even, during infancy and early years growth moves swiftly and later it slacken.

(iv) Different aspects of growth develop at different rates

Neither all parts of the body grow at the same rate nor do all aspects of mental growth proceed equally. They reach maturity at different times. Development also depends on maturation. **Maturation** refers to the sequence of biological changes in children. These orderly changes give children new abilities. Much of the maturation depends on changes in the brain and the nervous system. These changes assist children to improve their thinking abilities and motor skills. A rich learning environment helps children develop to their potential. Child·en must mature to a certain point before they can gain some skills. For instance, the brain of a four-month-old has not matured enough to allow the child to use words. A four-month-old will babble and coo. However, by two

years of age, with the help of others, the child will be able to say and understand many words. This is an example of how cognitive development occurs from simple tasks to more tasks that are complex. Likewise, physical skills develop from general to specific movements. For example, think about the way an infant waves its arms and legs. In a young infant, these movements are random. In several months, the infant will likely be able to grab a block with his or her whole hand. In a
little more time, the same infant will grasp a block with the thumb and forefinger.

(v) Most traits are correlated in development:

Generally, it is seen that the child whose intellectual development is above average is so in health size, sociability and special aptitudes.

(vi) Growth is complex:

All of its aspects are closely interrelated. The child's mental development is intimately related to his physical growth and its needs.

(vii) Growth is a product of the interaction of the organism and environment:

Among the environmental factors one can mention nutrition, climate the conditions in the home, the type of social organization in which individual moves and lives.

(viii) There are wide individual differences in growth:

Individual differences in growth are caused by differences in heredity and environment.

(ix) Growth is both quantitative and qualitative:

These two aspects are inseparable. The child not only grows in 'size'; he grows up or matures in structure and function too.

(x) Development is predictable:

It is possible for us to predict at an early age the range within which the mature development of the child is likely to fall. However, mental development cannot be predicted with the same degree of accuracy.

2.2.3 Factors Affecting Growth And Development

(1) Heredity: This means what we get from our ancestors. This determines how tall or heavy we can be. In this way heredity determines our body-built and intellectual capacity, as well as many other physical, mental and psycho-social behaviour traits.

(2) Prenatal environment: The environment of the pregnancy is an important factor in its later growth. If the mother is getting poor nutrition or is emotionally upset or smokes, drinks, or takes some medicine or suffers from certain diseases; the growth of the child can be adversely affected.

(3) Nutrition: Proper nutrition is essential for the healthy development of a child. A malnourished child's growth is either stunted or lopsided.

(4) Mental Level: Higher intelligence is associated with faster development while lower intelligence is associated with retardation in various aspects of development. Body and brain are associated as said "healthy mind in a healthy body".

(5) Emotional climate of home: If there is a lot of discord/fight at home or the child is not given enough love and attention or there is physical/mental abuse of the child, then the child's development is adversely affected. The affectionate, tolerant or respectful attitude towards others in the family has a positive impact on children.

(6) Health of the child: If the child frequently falls sick, or suffers from some disorder, or is disabled or has disturbed endocrine functioning, his development is likely to suffer. Any inner physiological disorder affects the development.

(7) Level of stimulation: The amount of stimulation an environment provides, the opportunities for exploration of environment, opportunities of interaction with other people—all influence the rate of development. Stimulation means anything which compels the person to act. We may say something which keeps a person busy.

(8) Socio-economic status: It determines the kind of nutrition, stimulation, facilities and opportunities the child gets and therefore, affects the rate of his development. It also means the social reputation and the financial conditions of the family.

(9) Sex: All children follow the same sequence of development. However, certain skills develop faster in girls and vice-versa. Sex is also a factor that sometime decides the potential of the child in some aspects of development.

2.3 Prenatal Development from conception to birth.

Conception:

New life begins with the union of a male sex cell (spermatozoon) and a female sex cell (ovum). Development begins with conception. All of the other cells in your body developed from this single cell. Each cell contains enduring messages from the parents carried on the chromosomes. Each chromosome houses many genes. Within the genes is a substance known as DNA (deoxyribonucleic acid).

The prenatal period extends from conception to birth, usually encompassing nine months of pregnancy. Development during the prenatal period is remarkably rapid. It is divided into three stages: (1) the germinal stage, (2) the embryonic stage, and (3) the foetal stage.

1. **The Germinal Stage:** The germinal stage is the first phase of prenatal development, encompassing the first two weeks after conception. This stage begins when a zygote is created through fertilization. Within 36 hours, rapid cell division begins, and the zygote becomes microscopic mass of multiplying cells. The first cell division

is called blastocyst. On the seventh day, the cell mass begins to implant itself in the uterine wall, this process is called implantation.

2. The Embryonic Stage: The embryonic stage, lasts from two weeks until the end of the second month. Once the placental circulation is in place; nutrients, oxygen, vitamins, and water in the mother's blood stream pass through the placenta and umbilical cord to the developing organism, which is called embryo. The embryo forms into three germ layers which give rise to different organs and tissues. The mesoderm forms the skeletal, muscle, skin, and lymphatic system. The endoderm forms the respiratory system, stomach, colon, liver, pancreas, urinary system thyroid and parathyroid. The ectoderm forms the central and peripheral nervous system.

3. The Foetal Stage: The foetal stage of the foetus is the third stage of prenatal development, lasting from two months through birth. Early in this stage muscles and bones begin to form. Foetus becomes capable of physical movements as skeletal structures harden. Organs formed in the embryonic stage continue to grow and gradually begin to function. Sex organs start to develop during the third month.

2.3.1 The First Trimester: Your Baby's Growth and Development in Early Pregnancy

Month One of Pregnancy : The amniotic sac is a water-tight sac that forms around the fertilized egg. It helps cushion the growing embryo throughout pregnancy. The placenta also develops at this point in the first trimester. The placenta is a round, flat organ that transfers nutrients from the mother to the baby, and transfers waste from the baby. A primitive face takes form with large dark circles for eyes. The mouth, lower jaw, and throat are developing. Blood cells are taking shape, and circulation will begin. By the end of the first

month of pregnancy, your baby is around 6-7mm (1/4 inch) long - about the size of a grain of rice!

Month Two of Pregnancy: Your baby's facial features continue to develop. Each ear begins as a little fold of skin at the side of the head. Tiny buds that eventually grow into arms and legs are forming. Fingers, toes, and eyes are also forming in the second month of pregnancy. The neural tube (brain, spinal cord, and other neural tissue of the central nervous system) is well formed. The digestive tract and sensory organs begin to develop. Bone starts to replace cartilage. The embryo begins to move, although the mother cannot yet feel it. By the end of the second month, your baby, now a foetus, is about 2.54cm (1 inch) long, weighs about 9.45g (1/3 ounce), and a third of baby is now made up of its head.

Month Three of Pregnancy: By the end of the third month of pregnancy, your baby is fully formed. Your baby has arms, hands, fingers, feet, and toes and can open and close its fists and mouth. Fingernails and toenails are beginning to develop and the external ears are formed. The beginnings of teeth are forming. Your baby's reproductive organs also develop, but the baby's gender is difficult to distinguish on ultrasound. The circulatory and urinary systems are working and the liver produces bile. At the end of the third month, your baby is about 7.6 -10 cm (3-4 inches) long and weighs about 28g (1 ounce).

2.3.2 The Second Trimester: Your Baby's Growth and Development in Middle Pregnancy

Month 4 of Pregnancy: In the second trimester of pregnancy -- months 4, 5, and 6 -- your baby's fingers and toes are well-defined. His eyelids, eyebrows, eyelashes, nails, and hair are formed, and teeth and bones are becoming denser. Your baby can even suck his or her thumb, yawn, stretch, and make faces. The nervous system is starting to function at this point in pregnancy. The reproductive organs and genitalia are now fully developed, and your health care provider can see on ultrasound if you are having a boy or a girl. Your baby's heartbeat may now be audible through an instrument called a

Doppler. By the end of the fourth month, your baby is about 6 inches long and weighs about 4 ounces.

Month 5 of Pregnancy: Hair is beginning to grow on your baby's head, and lanugo, a soft fine hair, covers his or her shoulders, back, and temples. This hair protects your baby and is usually shed at the end of the baby's first week of life. The baby's skin is covered with a whitish coating called vernix caseosa. This "cheesy" substance, thought to protect baby's skin from long exposure to the amniotic fluid, is shed just before birth. You may begin to feel your baby move, since he or she is developing muscles and exercising them. This first movement is called quickening. By the end of the fifth month of pregnancy, the baby is about 10 inches long and weighs from 1/2 to 1 pound.

Month 6 of Pregnancy: By the end of the sixth month, your baby is about 12 inches long and weighs about 2 pounds. His or her skin is reddish in colour, wrinkled, and veins are visible through the baby's translucent skin. Baby's finger and toe prints are visible. The eyelids begin to part and the eyes open. The baby may respond to sounds by moving or increasing the pulse, and you may notice jerking motions if baby hiccups. If born prematurely, your baby may survive after the 23rd week of pregnancy with intensive care.

2.3.3 The Baby's Growth and Development In the Third Trimester of Pregnancy

Month Seven of Pregnancy: At the end of the seventh month of pregnancy, fat begins to be deposited on your baby. Your baby is about 36 cm (14 inches) long and weighs from about 900 - 1800g (two to four pounds). Your baby's hearing is fully developed and he or she changes position frequently and responds to stimuli, including sound, pain, and light. If born prematurely, your baby would probably survive after the seventh month of pregnancy.

Month Eight of Pregnancy: The baby, who is now about 46cm (18 inches) long and weighs as much as about 2.27 kg (five pounds), will continue to mature and develop body fat reserves. We may notice that the baby is kicking more. Baby's brain is developing rapidly at this time, and he or she can see and

hear. Most internal systems are well developed, but the lungs may still be immature.

Month Nine of Pregnancy: Towards the end of the third trimester, your baby continues to grow and mature. His or her lungs are nearly fully developed. The baby's reflexes are coordinated so he or she can blink, close the eyes, turn the head, grasp firmly, and respond to sounds, light, and touch. The baby's position changes to prepare itself for labour and delivery. The baby drops down in your pelvis, and usually his or her head is facing down toward the birth canal. By the end of this pregnancy month, the baby is about 46- 51cm (18 to 20 inches) long and weighs about 3.2kg (seven pounds).

2.4 Delivery

Assisted delivery: Vaginal delivery is the most common type of birth. When necessary, assisted delivery methods are needed. While labour can be a straightforward, uncomplicated process, it might require the assistance of the medical staff. This assistance can vary from use of medicines to emergency delivery procedures.

Episiotomy: An episiotomy is a surgical incision made in the perineum (the area of skin between the vagina and the anus). The incision enlarges the vaginal opening to allow the baby's head to pass through more easily and to prevent tearing of the mother's skin. Most women will not need one. This is reserved for special circumstances.

There are two types of incisions: the midline, made directly back toward the anus, and the medio-lateral, which slants away from the anus. A local anesthetic might be used in mothers who do not opt for an epidural during labour.

Amniotomy ("Breaking the Bag of Water"): An amniotomy is the artificial rupture of the amniotic membranes, or sac, which contains the fluid surrounding the baby. The amniotomy can be done either before or during labour. An amniotomy is usually done to:

Induce or augment labour

- Place an internal monitor to assess the uterine contraction pattern
- Place an internal monitor on the baby's scalp to assess the infant's well-being
- Check for meconium (a greenish-brown substance, which is the baby's first stool)

Your health care provider will use an amniohook, which looks like a crochet hook, to rupture the sac. Once the procedure is completed, delivery should take place within 24 hours to prevent infection.

Induced labour : Induction of labour usually means that labour needs to be started for a number of reasons. It is most often used for pregnancies with medical problems or other complications. Labour is usually induced with Pitocin®, a synthetic form of the drug oxytocin given intravenously.

Medical reasons for inducing labour might include:

- Diabetes
- High blood pressure
- Ruptured membranes
- Small baby
- Past-due pregnancy
- Foetal monitoring
- Foetal monitoring is the process of watching the baby's heart rate. This can be external or internal.

Forceps delivery : Forceps look like two large spoons that the doctor inserts into the vagina and around the baby's head during a forceps delivery. The forceps are put into place and, the doctor uses them to gently deliver the baby's head through the vagina. The rest of the baby is delivered normally.

Vacuum extraction: A vacuum extractor looks like a small suction cup that is placed on the baby's head to help deliver the baby. A vacuum is created using a pump, and the baby is pulled down the birth canal with the instrument and with the help of the mother's contractions. The pump can often leave a bruise on the baby's head, which typically resolves over the first 48 hours.

Caesarean section: A caesarean section, also called a c-section, is a surgical procedure performed if a vaginal delivery is not possible. During this procedure, the baby is delivered through surgical incisions made in the abdomen and the uterus. A caesarean delivery might be planned advance if a medical reason calls for it, or it might be unplanned and take place during your labour if certain problems arise.

To promote a healthy pregnancy and birth of a healthy infant by taking the following steps before they become pregnant1:

- Develop a plan for their reproductive life.
- Increase their daily intake of folic acid (one of the B vitamins) to at least 400 micrograms.
- Make sure their immunizations are up to date.
- Control diabetes and other medical conditions.
- Avoid smoking, drinking alcohol, and using drugs.
- Attain a healthy weight.
- Learn about their family health history and that of their partner.
- *Seek help for depression or anxiety.*

2.5 Developmental Task: Infancy to Old age

According to Havighurst, a developmental task is a "task which arises as or about a certain period in the life of the individual, successful achievement of which leads to happiness and to success with later tasks, while failure leads to

unhappiness and difficulty with later tasks". Developmental task is a social expectation for every stage of development.

Each individual is unique, with a distinct personality and life experience. For this reason, age is not the only sign of where a particular child or adolescent is in terms of development. The different aspects of development are as follows.

• **Physical development** – genetic make-up, ethnicity, race, gender, nutrition and diet, exercise, sleep patterns, use of tobacco, alcohol or other drugs, stress and stressful life events, environmental toxins and socioeconomic status

• **Cognitive development** – academic setting, family environment, parent or caregiver involvement, access to early education opportunities, teacher support, personal motivation, gender and cultural or ethnic context

• **Emotional development** – individual temperament, parent and family relationships, support network, life experiences and transitions; media exposure and influence and a tendency toward risk-taking or delinquent behaviours

• **Social development** – peer influence, popularity, community and societal context

2.5.1 Infants (0-1 year of age)

Newborn – first month of life. Infancy is marked by very rapid growth, more so than at any other time

Reflexes – help infants survive before they can control their muscles; they are inborn responses to stimuli Swallow, cry, breathe, root (turn head and begin sucking), grasp

Physical Development

- Soft spot on head
- Head can be cone shaped
- Head looks much larger than the rest of their body
- Legs can be bowed

- Little strength and muscle control

Infant Milestones - physical

- 1-2 month. – hold head up
- 3 month. – hold rattle
- 3-5 month. – rolls over
- 4-5 month. – put objects in Mouth
- 5-9 month. – sit unsupported
- 5-9 month. – begin to crawl
- 6 month. – begin teething
- 9 month. – eats finger foods
- 9-12 month – taking first steps/begin walking

Emotional Development

- Infant's emotional development is linked to intellectual development. Newborns respond to 2 basic sensations: comfort and discomfort

Intellectual Development

- Learn through environment and experimentation
- Store each experience and later combine it with new information
- Learn through senses (sight, touch, hear, taste, smell) – especially taste & touch
- Learn to recognize voices and reach for objects.
- Newborns express needs through crying
- 1 month. – follow object with eyes
- 3 month. – coo, babble, shriek and can copy sounds adults make
- Less than 6 month. – they think the only objects that exist are those they can see – object permanence
- 6 month. – forms sense of self
- 8 month. – begin to understand simple concepts (in & out)

- 9 month. – say their first words
- 1 year – the can point to parts of their body and put nesting toys together(boxes of different sizes that fit inside one another)
- Begin to understand meanings to words before they can physically say them

Social Development

- Socially infants must learn to trust the adults in their world – sense of security
- Newborns respond to parents' voice and face
- 1-6 month. – develops trust of caregivers
- 3-5 month. – smiles
- 4 month – they show enjoyment at meals and playtime
- 4-12 month – recognizes own name
- Infants prefer family members and are wary of strangers
- 6- Month – anxious when parents leave – separation anxiety (lasts up to ~ 18 months.)
- The child is afraid of strangers

2.5.2 Toddlers (1 to 3 years of age)

Physical Development

- Toddlers grow taller and heavier, but they lose the plumpness of infancy (many will still have a pudgy belly)
- They are still top-heavy and this affects their balance when learning to walk
- Muscles become stronger
- Gain length in the arms, legs and midsection
- Learn to climb stairs, run, jump, kick, throw and catch – gross (large) motor skills
- Have stubby fingers which affects fine motor skills
- Build small block towers and turn pages of cloth or cardboard books
- Begin to scribble, fold paper, open screw-top containers, string large beads

- Potty training (toilet learning) begins

Physical Milestones

- 12-15 mo. - Climbs out of crib
- 12-15 mo. – Picks up small objects
- 15-18 mo. – runs
- 15-22 mo. – climbs stairs
- 15-22 mo. – eats with spoon
- 18-30 mo. – can undress self
- 1 ½ - 3 yr – begins toilet training

Emotional Development

- Are learning to be independent
- Want to do everything for themselves
- Frustration over physical limitations + desire to be independent Temper tantrums
- Dealing with Tantrums
- Caregivers should make sure the child is free from harm, turn your attention away from the child and let them cry it out and
- when the tantrum is over comfort them and assure them you love them but you do not like their behaviour
- Children throw tantrums to try to get something they want; if you give in to the child's wants, he/she learn that tantrums bring desired results

Intellectual Development

- Very curious about the world around them
- Like picture books and feeling new textures
- Can identify different sounds and smells
- Follows simple instructions by one year old
- Points to objects when named (12-18 months.)
- Can work very simple puzzles and follow very brief directions
- As they get older – memory and attention span increases
- Language skills greatly improve – begin building a vocabulary
- 1 year (3-5 words) – by 3 years (over 500 words)

- Make single-word sentences (12-18 months.)
- Can make short (2 word) sentences (18-24 mo.)
- Begin to use their name and plural and past tense forms of words

Social Development

- Prefer the company of family over peers
- Play alone or beside other children, but not with them
- Sharing is difficult (Toddler's creed)
- Learns the meaning of "no" (12-15 mo.)
- Waves "bye-bye" (18-24 months.)
- Temper Tantrums
- Will start to learn to cooperate and
- play well with others (2 ½ - 3 years)

2.5.3 Pre-schoolers (3-5 years of age)

Physical Development

- Taller, leaner and more poised than toddlers
- Play with ease – better at running and jumping
- Games with physical activity – playing
- outside, hide and seek, tag, riding tricycle
- Comb hair, brush teeth, work zippers and
- buttons, lace shoes

Physical Milestones

- 3 yrs. - Runs, jumps, hops, skips, rides tricycle, feeds and dresses self
- 4 yrs. – climbs jungle gym, draws recognizable Pictures
- 5 yrs. – walks straight line, skips rope, pours liquid, uses knife and fork

Emotional Development

- Fear – common emotion that terrorizes a preschooler
- Vivid imagination – monsters in closet, afraid of the dark
- Cannot always tell the difference between real and pretend

Intellectual Development

- Curious about events happening around them – Why?
- Vivid imaginations – like to listen and tell stories, enjoy humor
- Confuse fact and fiction
- Can form concepts about relationships between objects – size and shape
- Trouble with concept of time
- Can understand the concepts of right and wrong

Language skills

- Can make compound sentences
- By age four – know name, address, phone number
- By end of preschool years – know over 2,000 words
- **Attention span lengthens**
- 3 yrs. - Identify objects in pictures
- 4-5 yrs. – learning counting and colors
- 4 yrs. – repeat rhymes & songs

Social Development

- Pleasant in nature – 3 ½ yrs.
- Begin using simple manners and grooming
- 4 yrs. - Play with other children
- 5 yrs. - Learned how to share & what fair play is
- Don't care about gender
- Relationships with family are more positive
- Want to please, little helpers at home

<u>2.5.4 School Age Children 5-10 years old (some resources say 6-11)</u>

Physical Development

- Growth slows down
- Weight and height accelerate towards puberty
- Ability to play games with rules and traditional sports begin to have meaning

Emotional Development

- Early moral development

Intellectual Development

- Begins to reason logically
- Thinking is based on prior experience
- Master conservation
- experiments (realize quantity or amount)

Social Development

- Gender role identification
- Pre-operational thought – "everyone thinks like I do"
- Group play (jump rope, kickball)

2.5.5 Adolescence (12 to 18 years of age)

Adolescence as a transition period between childhood and adulthood. It's a "no man's land". He/she is neither a child nor an adult but is caught in a field of overlapping forces and expectations between the field of childhood and field of the adult. It is some-times referred as the period of teenage. This stage of development varies in length from family to family; from one socio-economic level to another, and from culture to culture. It includes the period of mental, emotional and social maturity, legal maturity as well as physical maturity.

This period experienced a spurt in physical growth, changes in holding proportions and the maturing of primary and secondary sex characteristics. Puberty is attained between 13 and 14 years of age. Puberty (the beginning of sexual maturity) occurs from the first menstrual period (i.e. the menarche) in girls and the appearance of pubic hair in boys. During puberty, male hormones (androgen) in boys are increased in production, and female hormones (oestrogen) in girls. Puberty stage varies from culture to culture and both boys and girls develop at different rates.

According to Havighurst, the adolescent developmental tasks are arranged as follows:

i). Accepting one's physique and using the body effectively – An Adolescent worry a lot about his physical appearance in term of size, height and weight

iii) Achieving ı ew and more mature relation with age mate of both sexes – the adolescent is expected to maintain a cordial relationship with his age group.

iii). Achieving a masculine or terminate role – An adolescent is expected to exhibit sex - roles

iv) Achieving assurance of economic independent – The Adolescent needs to acquire vocational skills to become economically independence

v) Achieving emotional independence of parents and other adults - should be able to control their aggressive tendency through learning.

vi) Selecting or preparing for an occupation – Adolescents are expected to choose their career based on certain factors that influence them. There is the need for career counselling.

vii) Preparing for marriage and family life – maintaining a friend relationship may lead them to marriage life.

viii. Developing intellectual skills and concepts for necessary civic competency – they also expected to develop their intellectual skills in readiness for secondary schools and higher institution

ix) Desiring and achieving socially responsible behaviour and -adolescents are expected to identify accepted behaviour

x) Acquiring a set of values as a guide to behaviour – Adolescents should address the societal form and standard accepted through exhibiting proper behaviour

2.5.6 Early Adulthood Period

Early adulthood is a period of adjustment to new pattern of life characterized by "reproductive age, problem age, and settling down age" (Hurlock, 1968). It is also a period of emotional tension (like adolescence period with heightened emotionality), creative age and commitments.

According to Havighurst, the early adulthood developmental tasks are arranged as follows:

i) Getting started in an occupation: Adults who are still in exploration stage of choice of occupation may try to settle done after getting an occupation. Others who have finished their educational career may get occupations that

will suit their interests and abilities. The occupation is of economic value to adult at these stages which commit him to adult roles and responsibilities.

ii) Selecting a mate – Immediately an adult settles down with accompanied occupation, he likes to get married, occupational mobility notwithstanding.

iii) Learning to live with a marriage partner – adults who get married at this stage, decide to learn to live with each other for proper adjustments of home.

iv) Starting a family – Adults will eventually learn to start and maintain family.

v) Maintaining a home with arrival of children. Adults would like to manage a home in its ramifications.

vi) Tasking a civic responsibility – Adults should take certain civic responsibilities in communities and society.

vii) Finding a congenial social group – Adults should belong to social groups of interest that will not constitute a hindrance to his roles, accessibility of social groups will enable him to interact and be able to know the world around him so that individuals will not continue to lag behind among members of their groups.

2.5.7 Middle Adulthood (Middle Age)

This period generally lies between age forty and age sixty. It is a long period in the life span and is subdivided into early middle (40 to 50 years) and advanced middle (50 to 60 years). During middle age, physical and physiological changes become more apparent. It is marked by mental changes especially at sixty years where there is a decline in physical vigour. The middle age is characterized by the time when men undergo a change in virility and women, a change in fertility. This period also experienced some developmental crisis in terms of parental expectations from their children or children's failures to come up to their expectations

The developmental tasks of middle age as highlighted by Havighurst are as follows:

i) Achieving adult civic and social responsibility,

ii) Assisting teenage children to become responsible and happy adults
iii) Developing adult leisure- time activities;
iv) Relating oneself to one's spouse as a person
v) Accepting and adjusting to the physiological changes of middle age;
vi) Reaching and maintaining satisfactory performance in one's occupational career and
vii) Adjusting to aging parents,

2.5.7 Late Adulthood

Immediately after middle adulthood, the next stage with identical similarities and structural characteristics is the late adulthood or old age. In adulthood, the later years is classified into two, namely early old age (age 60 to age 70); and advanced old age (70 to death). The beginning of old age is known as elderly who occurs after middle age.

The developmental tasks of old age have been summarized by Havighurst as:

i) Adjusting to decreasing physical strength and health – In this period, individuals are expected to adjust to weak in strength and health wise
ii) Adjusting to retirement and reduced income – Old people are expected to adjust to economic pressures such as low income.
iii) Adjusting to death of spouse – Old people find it difficult to adjust in terms of death of spouse At times the lost of dear one creates emptiness syndrome.
iv) Establishing an explicit affiliation with members of one's age group – Old people must adjust to companionship in order to avoid loneliness.
v) Establishing satisfactory physical living arrangements and
vi) Adapting to social roles in a flexible manner - Old people must adjust to his social roles both in the home and community at large.

2.6 Let us sum up

- Development begins at the moment of conception, when the sperm from the father merges with the egg from the mother.
- Within a span of 9 months, development progresses from a single cell into a zygote and then into an embryo and foetus.
- The foetus is connected to the mother through the umbilical cord and the placenta, which allow the foetus and mother to exchange nourishment and waste. The foetus is protected by the amniotic sac.
- Smoking, alcohol use, and drug use are all likely to be harmful to the developing embryo or foetus, and the mother should entirely refrain from these behaviours during pregnancy or if she expects to become pregnant.
- Environmental factors, especially homelessness and poverty, have a substantial negative effect on healthy child development.
- Babies are born with a variety of skills and abilities that contribute to their survival, and they also actively learn by engaging with their environments.

2.7 Lesson-End activities

1. Given the negative effects of poverty on human development, what steps do you think that societies should take to try to reduce poverty?

2.8 Model Questions

1. Describe the three stages of prenatal development and problems that can occur during each.
2. What is developmental task?
3. Differentiate between growth and development.
4. Describe briefly the principles of growth and development

5. What are the main characteristics of a baby under the age of two or three years?
6. List the main points of physical development in adolescents.
7. Identify the three needs of early childhood.

2.9 Check your progress

1) Match the columns of physical development of the following stages:-

A	B
1. Infancy	a. considerable stability is attained.
2. Childhood	b. Physical maturity attained at optimum level.
3. Adolescence	c. Motor & neuromuscular coordination begins.

2) Match the columns of social development of the following stages:-

A	B
1. Infancy	a. Radical outlook and questioning of the social norms.
2. Childhood	b. Social response directed towards family members.
3. Adolescence	c. Social values, attitudes and interests are developed.

Answer 1) 1-a 2-c 3-b 2) 1-b 2-c 3-a

2.10 Suggested Reading

1. Sanden Vander W. James (1989): ***Human Development,*** Refred A Knopg, INC. New York.
2. Sprinthall, C., Richard and Sprinthall A. Norman (1990): ***Educational Psychology, A Developmental Approach.*** McGraw Hill Publishing Company, New York.
3. Wolman, B.B. (Ed), (1982): ***Handbook of Developmental Psychology,*** Prentice Hall:

Unit – III

PLAN OF THE STUDY

3.0 Aims and Objectives
3.1 Introduction
3.2 Personality
  3.2.1 Meaning and Definition
  3.2.2 Types of Personality
3.3 Learning and Remembering
3.4 Type of Learning
3.5 Learning Theories
3.6 Let us sum up
3.7 Lesson-End activities
3.8 Model Questions
3.9 Check your progress
3.10 Suggested Reading

3.0 Aims and Objectives

In this Unit the personality psychology and educational as a discipline will be discussed. After going through this lesson you will be able to

- Review the various definitions of human personality
- understand the history of personality theories
- Explain the concept & nature of learning.
- Explain the steps involved in the process of learning.
- Tell the meaning & importance of learning

3.1 Introduction

Personality is a term that has been used very widely but each time to mean some different aspects of a person. Every society and in it every school, takes

a profound interest in the development of the personality of children. Etymologically, the word 'personality' has been derived from the Latin word 'Persona'. At first this word was used for the mask worn by the actors to change their appearance but later on, it began to be used for the actors themselves. Since then, the term 'personality' has been used to depict outward appearance or external behaviour etc. Most people use the term "personality "to identify the most obvious characteristic of a person, or to refer to that person's social skills.

3.2.1: Definitions of the personality:

When you talk about someone's personality, what do you really mean? Have you ever heard someone say, 'She's very aggressive" or "He's so shy -- such an introvert!" or "My mother is really sweet"? Or how about "He's very dependent" or "She's got a terrific personality -- a lot of sparkle!" You may not have heard exactly those words, but you can see what we're suggesting. In contrast to psychologists' use of the term, when the average person uses the term, "personality" has a variety of meanings, each unique to the situation in which it appears.

Psychologists are mainly interested in personality to

(1) Explain why people with similar heredity, experience, and motivation may react differently in the same situation; and

(2) Explain why people with different heredity, past experiences, and/or motivation may nevertheless react similarly in the same situation.

- **G.W. Allport** – 'Personality is a dynamic organisation, inside the person, of psychophysical systems that create the person's characteristic patterns of behaviour, thoughts and feelings'.
- **Muirhead** – "Personality is the whole individual considered as a whole. It may be defined as "the most characteristic integration of an individual structure, modes of interest, attitudes, behaviour and capacities".

- **N.L.Munn** – 'Personality may be defined as the most characteristic – integration of an individuals structure, modes of behaviour, interest, attitudes, capacities, abilities and aptitudes'.
- **C.V.Good** – 'The total psychological and social reaction of an individual, the synthesis of his subjective, emotional and mental life.
- **Valentine** – 'Personality is the sum total of innate and acquired dispositions'.
- Personality is defined as *an individual's consistent patterns of feeling, thinking, and behaving* (John, Robins, & Pervin, 2008).
- Personality is the set of psychological traits and mechanisms within the individual that are organized and relatively enduring and that influence his or her interactions with, and adaptations to, the intrapsychic, physical, and social environments.

3.2.2 Characteristics of personality:

Personality has got certain important characteristics, they are:

1. Personality is always dynamic
2. Personality determines our thinking, reasoning and actions.
3. Personality is both physical and psychological (outer and inner).
4. Personality develops through social interaction.
5. Every personality has some uniqueness.
6. Personality has organized and integrated system.
7. Personality refers to the process of adjustment to our environment.

3.2.3 Theories of Personality

(i) Phrenology

Early theories assumed that personality was expressed in people's physical appearance. One early approach, developed by the German physician Franz Joseph Gall (1758–1828) and known as phrenology, was based on the idea that we could measure personality by assessing the patterns of bumps on people's skulls.

(ii) Somatology

Another approach, known as somatology, championed by the psychologist William Herbert Sheldon (1898–1977), was based on the idea that we could determine personality from people's body types . Sheldon (1940) [2] argued that people with more body fat and a rounder physique ("endomorphs") were more likely to be assertive and bold, whereas thinner people ("ectomorphs") were more likely to be introverted and intellectual.

(iii) Physiognomy

Another approach to detecting personality is known as physiognomy, or the idea that it is possible to assess personality from facial characteristics.

3.2.4 Major Schools of Personality Psychology

School	*Founders*	*Essential Premises*
Psychoanalytic	Sigmund Freud	Self-regulating and independent unconscious processes make up the essence of personality. They operate though mental structures that are in continual conflict.
Neo-psychoanalytic	Alfred Adler, Carl Jung, Karen Horney	Conscious individual, social, and interpersonal factors are powerful forces in shaping personality.
Humanistic	Albert Ellis, Carl Rogers, Abraham Maslow	People are basically good and strive toward maximum personal development or self-actualization.
Behavioural	John Watson, B. F. Skinner	Personality is the observable result of reinforcement.

Genetic/Biological	William Sheldon, Edmund O. Wilson, Hans Eysenck	Genes, hormones, and neurochemicals in the brain regulate the greater portion of human personality.
Trait	Raymond Cattell, Hans Eysenck	Differences among people can be reduced to a limited number of distinct behavioural styles or traits.
Cognitive	Albert Bandura, Ulric Neisser, Albert Ellis	Personality results from the interplay of learned and innate styles of thinking.

3.2.5 Psychological ("personality") Types

According to Jung's theory of Psychological Types we are all different in fundamental ways. One's ability to process different information is limited by their particular type. These types are sixteen.

People can be either Extroverts or Introverts, depending on the direction of their activity; Thinking, Feeling, Sensing, Intuitive, according to their own information pathways; Judging or Perceiving, depending on the method in which they process received information.

1. Extroverts vs. Introverts

Extroverts are directed towards the objective world whereas Introverts are directed towards the subjective world. The most common differences between Extroverts and Introverts are shown below:

Extroverts	**Introverts**
• are interested in what is happening around them • are open and often talkative	• are interested in their own thoughts and feelings • need to have own territory

• compare their own opinions with the opinions of others • like action and initiative • easily make new friends or adapt to a new group • say what they think • are interested in new people • easily break unwanted relations	• often appear reserved, quiet and thoughtful • usually do not have many friends • have difficulties in making new contacts • like concentration and quiet • do not like unexpected visits and therefore do not make them • work well alone

2. Sensing vs. Intuition

Sensing is an ability to deal with information on the basis of its physical qualities and its affection by other information. Intuition is an ability to deal with the information on the basis of its hidden potential and its possible existence. The most common differences between Sensing and Intuitive types are shown below:

Sensing types	Intuitive types
• see everyone and sense everything • live in the here and now • quickly adapt to any situation • like pleasures based on physical sensation • are practical and active • are realistic and self-confident	• are mostly in the past or in the future • worry about the future more than the present • are interested in everything new and unusual • do not like routine • are attracted more to the theory than the practice • often have doubts

3. Thinking vs. Feeling

Thinking is an ability to deal with information on the basis of its structure and its function. Feeling is an ability to deal with information on the basis of its initial energetic condition and its interactions. The most common differences between Thinking and Feeling type are shown below:

Thinking types	Feeling types
• are interested in systems, structures, patterns • expose everything to logical analysis • are relatively cold and unemotional • evaluate things by intellect and right or wrong • have difficulties talking about feelings • do not like to clear up arguments or quarrels	• are interested in people and their feelings • easily pass their own moods to others • pay great attention to love and passion • evaluate things by ethics and good or bad • can be touchy or use emotional manipulation • often give compliments to please people

4. Perceiving vs. Judging

Perceiving types are motivated into activity by the changes in a situation. Judging types are motivated into activity by their decisions resulting from the changes in a situation. The most common differences between Perceiving and Judging types are shown below:

Perceiving types	Judging types
• act impulsively following the situation • can start many things at once without finishing them properly	• do not like to leave unanswered questions • plan work ahead and tend to finish it

• prefer to have freedom from obligations • are curious and like a fresh look at things • work productivity depends on their mood • often act without any preparation	• do not like to change their decisions • have relatively stable workability • easily follow rules and discipline

Types of Personality Disorders

Personality disorders are a class of psychological conditions that are characterized by a pattern of long term behaviour that deviates from societal expectations, and create serious problems in relationships and society. People with personality disorders tend to be inflexible, rigid and manipulative. Although most feel that their behaviours are justified and perfectly fine, they often have a tunnel-vision view of the world and have problems connecting with others in socially acceptable ways.

- **Paranoid personality disorder:** characterized by a pattern of irrational suspicion and mistrust of others, interpreting motivations as malevolent.
- **Schizoid personality disorder:** lack of interest and detachment from social relationships, apathy, and restricted emotional expression.
- **Schizotypal personality disorder:** a pattern of extreme discomfort interacting socially, and distorted cognitions and perceptions.
- **Antisocial personality disorder:** a pervasive pattern of disregard for and violation of the rights of others, lack of empathy, bloated self-image, manipulative and impulsive behaviour.

- **Borderline personality disorder:** pervasive pattern of instability in relationships, self-image, identity, behaviour and affects often leading to self-harm and impulsivity.
- **Histrionic personality disorder:** pervasive pattern of attention-seeking behaviour and excessive emotions.
- **Narcissistic personality disorder:** a pervasive pattern of grandiosity, need for admiration, and a lack of empathy.
- **Avoidant personality disorder:** pervasive feelings of social inhibition and inadequacy, extreme sensitivity to negative evaluation.
- **Dependent personality disorder:** pervasive psychological need to be cared for by other people.
- **Obsessive-compulsive personality disorder (not the same as and quite different from obsessive-compulsive disorder):** characterized by rigid conformity to rules, perfectionism, and control to the point of satisfaction and exclusion of leisurely activities and friendships.
- **Personality change due to another medical condition** – a personality disturbance due to the direct effects of a medical condition.
- **Other specified personality disorder** – symptoms characteristic of a personality disorder but fails to meet the criteria for a specific disorder, with the reason given.
- **Personality disorder not otherwise specified**

3.3 LEARNING

There is no one, simple definition of learning. Learning is a complex concept that is defined differently according the context in which it is being discussed. Psychological definitions emphasise that learning involves 'a change in behaviour or potential behaviour that occurs as a result of experience

3.3.1 Meaning and Definitions of learning

Learning, in psychology, the process by which a relatively lasting change in potential behaviour occurs because of practice or experience. Learning is also

a process of acquiring modifications in existing knowledge, skills, habits, or tendencies through experience, practice, or exercise.

- **Gates and others** "Learning is the modification of behaviour through experience"
- **Henry, P smith** "Learning is the acquisition of new behaviour or strengthening or weakening of old behaviour as a result of experience".
- **Crow and Crow** "Learning is the acquisition of habits, knowledge and attitudes. It involves new ways of doing things, and it operates in an individual's attempt to overcome obstacles or to adjust to new situations."
- **Skinner** "Learning is the process of progressive behaviour adaptation."
- **Munn** "To learn is to modify behaviour and experience."
- **M. L. Bigge** "Learning may be considered as change in insights, behaviour, perception, motivation or a combination of these."

The above definitions emphasize four attributes of learning...

- As Process: the first is that learning is permanent change in behaviour.
- It does not include change due to illness, fatigue, maturation and use of intoxicant.
- The learning is not directly observable but manifests in the activities of the individual.
- Learning depends on practice and experience.

3.3.2 Characteristics of Learning

Yoakum & Simpson have stated the following general characteristics of learning: Learning is growth, adjustment, organisation of experience, purposeful, both individual and social, product of the environment.

According to W.R Mc law learning has the following characteristics.

1. Learning is a continuous modification of behaviour continues throughout life.

2. Learning is pervasive. It reaches into all aspects of human life into all aspects of human life.

3. Learning involves the whole person, socially, emotionally & intellectually.

4. Learning is often a change in the organisation of behaviour.

5. Learning is developmental. Time is one of its dimensions.

6. Learning is responsive to incentives. In most cases positive incentives such as rewards are most effective than negative incentives such as punishments.

7. Learning is always concerned with goals. These goals can be expressed in terms of observable behaviour.

8. Interest & learning are positively related. The individual learns bet those things, which he is interested in learning. Most boys find learning to play football easier than learning to add fractions.

9. Learning depends on maturation and motivation.

3.4 Types of Learning

Learning has been classified in many ways.

I. Informal, formal and non-formal learning:

- Informal learning is incidental. It takes place throughout life. It is not planned.
- Formal learning is intentional and organized. It takes place in formal educational institution.
- Non-formal is also intentional & organized. It is flexible.

II. Individual or Group learning: Learning is called either individual or group learning depending upon the number of individuals involved in the learning process.

III. Another classification involves the types of activity involved

(a) Motor learning: - when learning involves primarily the use of muscles it is called as motor learning. e.g.: learning to walk, to operate a typewriter

(b) Discrimination learning: - Learning which involves the act of discrimination is called discrimination learning. e.g. infant discriminates between mother and aunt, milk and water.

(c) Verbal learning: - when learning involves the use of words it is called as verbal learning.

(d) Concept learning: - when learning involves the formation of concept it is called as concept learning.

(e) Sensory learning: - when learning is concerned with perception and sense it is sensory learning.

(f) Spatial learning – involves learning about the relations among many stimuli

(h) Episodic learning – remembering sequences of events that we witness

(i) Observational learning – learning by watching and imitation other people

3.3.4 LEARNING PROCESS

Learning is a process. It is carried out through steps. Learning process involves –

(a) A motive or a drive.

(b) An attractive goal.

(c) A block to the attainment of the goal.

Let us see the steps one by one –

(a) A motive or a drive: Motive is the dynamic force that energizes behaviour and compels an individual to act. We do any activity because of our motives or our needs. When our need is strong, enough we are compelled to strive for its satisfaction. Learning takes place because of response to some stimulation. As long as our present behaviour, knowledge, skill and performance are adequate to satisfy all our needs, we do not feel any necessity to change our behaviour or acquire new knowledge and skills. It is this requirement, which initiates a learner to learn something.

(b) Goal: Every individual has to set a definite goal for achievement. We should always have a definite goal for achieving anything. If a definite goal is set then learning becomes purposeful and interesting.

(c) Obstacle /block /barrier: The obstacle or block or the barrier is equally important in the process of learning. The obstacle or the barriers keep us away from attaining the goal. Now, you will think how the obstacle can be important in the process of learning. So let me tell you, if you face no difficulty of any kind in attaining the goal, you will not bring any change in your present behaviour or stock of knowledge or skills. Thus, the block or the barrier is an essential step in the learning process.

3.5 LEARNING THEORIES

Learning as a process focuses on what happens when the learning takes place. Explanations of what happens constitute **learning theories**. A **learning theory** is an attempt to describe how people and animals learn, thereby helping us understands the inherently complex process of learning. **Learning theories** have two chief values according to Hill (2002). One is in providing us with vocabulary and a conceptual framework for interpreting the examples of learning that we observe. The other is in suggesting where to look for solutions to practical problems. The theories do not give us solutions, but they do direct our attention to those variables that are crucial in finding solutions. The three main categories or philosophical frameworks under which learning theories falls are *behavioural, cognitive, and constructivism*. Behaviourism focuses only on the objectively observable aspects of learning. Cognitive theories look beyond behaviour to explain brain-based learning. In addition, constructivism views learning as a process in which the learner actively constructs or builds new ideas or concepts.

1. Operant Conditioning

Operant conditioning (sometimes referred to as ***instrumental conditioning***) is a method of learning that occurs through rewards and punishments for behaviour. Through operant conditioning, an association is made between a

behaviour and a consequence for that behaviour. Behaviourist B.F. Skinner coined the term operant conditioning, which is why it is also referred as Skinnerian conditioning. As a behaviourist, Skinner believed that internal thoughts and motivations could not be used to explain behaviour.
Instead, he suggested, we should look only at the external, observable causes of human behaviour. Skinner used the term *operant* to refer to any "active behaviour that operates upon the environment to generate consequences" (1953). In other words, Skinner's theory explained how we acquire the range of learned behaviours we exhibit each and every day. Behaviour that is reinforced tends to be repeated (i.e. strengthened); behaviour that is not reinforced tends to die out-or be extinguished (i.e. weakened). Skinner studied operant conditioning by conducting experiments using animals, which he placed in a "*Skinner Box*" .

The Skinner box involved placing an animal (such as a rat or pigeon) into a sealed box with a lever that would release food when pressed. If food was released every time the rat pressed the lever, it would press it more and more because it learnt that doing so gives it food. Lever pressing is described as an operant behaviour, because it is an action that results in a consequence. In other words, it operates on the environment and changes it in some way. The food that is released as a result of pressing the lever is known as a reinforcer, because it causes the operant behaviour (lever pressing) to increase. Food could also be described as a conditioned stimulus because it causes an effect to occur.

Note: There is an important difference between a reward and a reinforcer in operant conditioning.
• A reward is something, which has value to the person giving the reward, but may not necessarily be of value to the person receiving the reward.
• A reinforcer is something, which benefits the person receiving it, and so results in an increase of a certain type of behaviour.

Skinner identified three types of responses or operant that can follow behaviour.

• **Neutral operants**: Responses from the environment that neither increase nor decrease the probability of a behaviour being repeated.

• **Reinforcers are** any event that strengthens or increases the behaviour it follows. There are two kinds of reinforcers.

1. **Positive reinforcers** are favourable events or outcomes that are presented after the behaviour. In situations that reflect positive reinforcement, a response or behaviour is strengthened by the addition of something, such as praise or a direct reward.
2. **Negative reinforcers** involve the removal of an unfavourable events or outcomes after the display of a behaviour. In these situations, a response is strengthened by the removal of something considered unpleasant. In both of these cases of reinforcement, the behaviour **increases.**

• **Punishment** is the presentation of an adverse event or outcome that causes a decrease in the behaviour it follows. Punishment weakens behaviour. There are two kinds of punishment:

1. **Positive punishment**, sometimes referred to as punishment by application, involves the presentation of an unfavourable event or outcome in order to weaken the response it follows.
2. **Negative punishment**, also known as punishment by removal, occurs when an favourable event or outcome is removed after a behaviour occurs.

In both of these cases of punishment, the behaviour **decreases.**

Schedules of Reinforcement:

- **Intermittent reinforcement** - reinforcement is given only part of the times the animal gives the desired response.
- **Continuous reinforcement** - reinforcement is given every time the animal gives the desired response.
- **Ratio reinforcement** - a pre-determined proportion of responses will be reinforced.

- **Fixed ratio reinforcement** - reinforcement is given on a regular ratio, such as every fifth time the desired behaviour is produced.
- **Variable (random) fixed reinforcement**- reinforcement is given for a predetermined proportion of responses, but randomly instead of on a fixed schedule.
- **Interval reinforcement**- reinforcement is given after a predetermined period of time.
- **Fixed interval reinforcement** - reinforcement is given on a regular schedule, such as every five minutes.
- **Variable interval reinforcement** - reinforcement is given after random amounts of time have passed.

In animal studies, Skinner found that continuous reinforcement in the early stages of training seems to increase the rate of learning. Later, intermittent reinforcement keeps the response going longer and slows extinction. Skinner specifically addressed the applications of behaviourism and operant conditioning to educational practice. He believed that the goal of education was to train learners in survival skills for self and society. The role of the teacher was to reinforce behaviours that contributed to survival skills, and extinguish behaviours that did not. Behaviourist views have shaped much of contemporary education in children and adult learning.

2. Classical Conditioning

Classical conditioning is a term used to describe learning which has been acquired through experience. One of the best-known examples of classical conditioning can be found with the Russian psychologist Ivan Pavlov and his experiments on dogs. In these experiments, Pavlov trained his dogs to salivate when they heard a bell ring. In order to do this he first showed them food, the sight of which caused them to salivate. Later Pavlov would ring a bell every time he would bring the food out, until eventually, he could get the dogs to salivate just by ringing the bell and without giving the dogs any food.

In this simple but ingenious experiment, Pavlov showed how a reflex (salivation, a natural bodily response) could become conditioned (modified) to an external stimulus (the bell) thereby creating a conditioned reflex/response.

Components Involved In Classical Conditioning

We can gain a better understanding of classical conditioning by looking at the various components involved in his experiment;

- The unconditioned stimulus.(UCS)
- The conditioned stimulus.(CS)
- The unconditioned reflex/response.(UCR)
- The conditioned reflex/response. (CR)

Note: In its strictest definition classical conditioning is described as a previously neutral stimulus which causes a reflex (stimulus means something which causes a physical response).

The Unconditioned Stimulus (food): (UCS) An unconditioned stimulus is anything, which can evoke a response without prior learning or conditioning.

For example, when a dog eats some food it causes his mouth to salivate. Therefore the food is an unconditioned stimulus, because it causes a reflex response (salivation) automatically and without the dog having to learn how to salivate.

Unconditioned Stimulus – This causes an automatic reflex response.

Conditioned Stimulus (bell): (CS) The conditioned stimulus is created by learning, and therefore does not create a response without prior conditioning.

For example, when Pavlov rang a bell and caused the dogs to salivate, this was a conditioned stimulus because the dogs learnt to associate the bell with food. If they had not learnt to associate the bell with food, they would not have salivated when the bell was rung.

Conditioned Stimulus – You need to learn first before it creates a response. It is an acquired power to change something.

Unconditioned Reflex/Response (salivation): (UCR) An unconditioned reflex is anything that happens automatically without you having to think

about it, such as your mouth salivating when you eat. Unconditioned Reflex – Reflex that happens automatically and you did not have to learn how to do it.

Conditioned Reflex (salivation in response to bell): (CR) A conditioned reflex is a response which you have learnt to associate with something.

For example, the dogs salivated when Pavlov rang a bell, when previously (without conditioning) the bell would not cause the dogs to salivate.

Conditioned Reflex – A reflex that can be evoked in response to a conditioned stimulus (a previously neutral stimulus).

• **Basic concepts in classical conditioning:**

There are several principles that are associated with classical conditioning, some of these are:

• **Extinction:** a conditioned response will disappear over time when the conditioned stimulus is no longer presented.

• **Spontaneous recovery:** sometimes there is the weak appearance of a previously extinguished response.

• **Stimulus generalization:** this is when individuals respond in this same way to experience stimuli. For example, all fuzzy animals scaring a young child instead of just a fuzzy cat.

• **Stimulus discrimination:** organisms can learn to discriminate between various stimuli.

• **Higher order conditioning:** this is when a neutral stimulus can cause the conditioned response sense if it had been associated with the conditioned stimulus.

3.6 Let us sum up

- Personality is an individual's consistent patterns of feeling, thinking, and behaving. Personality is driven in large part by underlying individual motivations, where motivation refers to a need or desire that directs behaviour.
- Early theories assumed that personality was expressed in people's physical appearance.

- Personalities are characterized in terms of traits—relatively enduring characteristics that influence our behaviour across many situations.
- There is often only a low correlation between the specific traits that a person expresses in one situation and those that he expresses in other situations. Personality predicts behaviour better when the behaviours are aggregated or averaged across different situations.
- Learning may be defined as a relatively durable change in behaviour due to experience. If the change in behaviour is temporary, or due to instinct or maturation, it is not learning.
- Learning helps us adapt to our environment.
- The two basic types of learning are classical conditioning and operant conditioning or instrumental learning.
- Classical conditioning involves pairing of a neutral stimulus and a natural stimulus (CS and UCS) leading to formation of association between neutral stimulus and response.
- Operant conditioning is a process through which organisms learn to repeat behaviours that produce positive outcomes or avoid or escape from the negative outcomes.
- Skinner defined reinforcement as any operation or action that increases the rate of response.
- In escape or avoidance learning the reinforcer is negative and the organism learns to escape or avoid its presence.
- In the case of continuous reinforcement, every correct response is reinforced.
- The process of learning language is called verbal learning.
- Observational learning is also used in acquiring new skills by observing the behaviour of others.

3.7 Lesson-End activities

1. Think of someone you know well—say, a friend, family member, or roommate. Consider the many characteristics that make this person unique. List the five adjectives you think best capture this person's personality. For example, if you were to describe this person to

someone, what five adjectives would you use? Now, ask your target person to list the five adjectives *he or she* thinks best describe that person. Compare your lists

2. Consider your own personality and those of people you know. What traits do you enjoy in other people, and what traits do you dislike?

3.8 Model Questions

1. What is personality?
2. Mention any four types of personality.
3. Define learning.
4. What do you mean my learning?
5. Explain the concept of learning and state its characteristics.
6. Write the different types of learning.
7. What is Operant Conditioning? Describe theory operant conditioning given by Skinners with appropriate illustration.
8. Define reinforcement. What are the various schedules of reinforcement? Explain with examples.
9. Write short notes on the following:
   a. Conditioned Stimulus
   b. Conditioned Response
   c. Unconditioned Response

3.9 Check your progress

Fill in the blanks with appropriate words.

1. Learning is always concerned with goals. These goals can be expressed in terms of____________________.

2. Pavlovian conditioning is known as .... conditioning.

3. .... advocated the role of operant conditioning.

4.__________, sometimes referred to as punishment by application, involves the presentation of an unfavourable event or outcome in order to weaken the response it follows.

5. When learning involves the use of words it is called as __________

Answers : 1. observable behaviour 2. Classical 3. Skinner 4. Positive punishment 5. Verbal learning

3.10 Suggested Reading

1. Allport, G. W. (1937). Personality: A psychological interpretation. New York, NY: Holt, Rinehart, & Winston.
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Unit – IV

PLAN OF THE STUDY

4.0 Aims and Objectives
4.1 Introduction
4.2 Memory
4.2.1Meaning and Definition
4.2.2 Types of Memory
4.2.3 Factors influencing memory
4.3 Behaviour
4.4 Factors influencing behaviour
4.5 Behaviour Modification
4.5.1 Definition
4.5.2 Techniques
4.6 Let us sum up
4.7 Lesson-End activities
4.8 Model Questions
4.9 Check your progress
4.10 Suggested Reading

4.0 Aims and Objectives

In this unit concept of memory and behaviour will be discussed. After going through this lesson you will be able to

- gain an insight into the mental processes involving memory,
- understand the concept of forgetting
- analyse the motive for human behaviour
- acquire techniques for modifying behaviour

4.1 Introduction

Memory is the special ability of our mind to store when we learn something to recollect &reproduce it after some time. Memory is the complex process involving learning, retention, recall & recognition. The experiences which we undergo, leaves traces in our minds in the form of 'Schemas'. The length of our retention depends on the strength & quality of the traces.
Memory refers to the encoding storage and retrieval of information. Memory is said to consist of three cognitive process.

1. Encoding – receiving sensory signals.
2. Storage – putting the coded informations in the memory
3. Retrieval – encoded store d information is accessed or when it is to be used.

4.2 Definitions

- Guilford: "Memory is the retention or storage of information in any form".
- Woodworth & Marquis: "Memory consists in learning what was previously learned".
- Ryburn: "The power that we have to store our experience and to bring them back into the field of consciousness some time after the experience have occurred is termed as memory".
- F'iedsetal: "Memory is the ability to retain & reproduce impressions once perceived"

4.2.2 Types of Memory:

Memory is broadly divided into two types based on experience

1. Explicit (Declarative) Memory

When we assess memory by asking a person to consciously remember things, we are measuring explicit memory. Explicit (declarative) memory refers to knowledge or experiences that can be consciously

remembered. There are two types of explicit memory: episodic and semantic. *Episodic memory* refers to the firsthand experiences that we have had. *Semantic memory* refers to our knowledge of facts and concepts about the world.

2. Implicit (Nondeclarative) Memory

While explicit memory consists of the things that we can consciously report that we know, implicit (nondeclarative) memory refers to knowledge that we cannot consciously access. However, implicit memory is nevertheless exceedingly important to us because it has a direct effect on our behaviour . Implicit memory refers to the influence of experience on behaviour , even if the individual is not aware of those influences.

Procedural memory refers to our often unexplainable knowledge of how to do things. When we walk from one place to another, speak to another person in English, dial a cell phone, or play a video game, we are using procedural memory. Procedural memory allows us to perform complex tasks, even though we may not be able to explain to others how we do them.

A second type of implicit memory is classical conditioning effects, in which we learn, often without effort or awareness, to associate neutral stimuli (such as a sound or a light) with another stimulus (such as food), which creates a naturally occurring response, such as enjoyment or salivation.

The final type of implicit memory is known as priming, or changes in behaviour as a result of experiences that have happened frequently or recently.

4.2.2.1 Type of memory based on duration

1. **Immediate Memory**: This is also known as short term memory. This memory is when the individual has to reproduce immediately after he has learnt something, thus the time span is very less for the matter to be registered

in the consciousness. Hence the learnt matter is forgotten rapidly. e.g. we may first look at the seat number of our ticket & once we sit down we forget about it. In this type of memory, the retention time is very brief. Immediate memory is needed which helps us to learn a thing immediately with speed and accuracy, remember it for a short duration and forget it rapidly after use.

2. **Short-term memory**: This type of memory is also called as temporary memory. It is not short lived as the immediate memory. The information temporarily stored in short-term memory may last as long as thirty seconds even if the material is not being rehearsed. However, some people are able to retain much more information in short- term memories by a process called chunking, which groups information by coding it, e.g. the number 143254376 can be remembered by listing under three heads: 143, 254, 376 for better remembering.

3. **Long term memory**: This is also known as Permanent Memory. Here the individual learns and retains the information for a very long period of time. There is an interval of time between learning & recall or reproduction. Thus permanent memory is involved e.g. knowing our account number of the bank or the phone number. So we see that memory is a process involving learning & reproduction. The amount of material that can be immediately reproduced after one repetition is called **span of memory.** The phenomenon of memory may be studied under four different aspects: viz. the four R's.

1. Registration or Learning
2. Retention
3. Recall
4. Recognition

1. REGISTRATION OR LEARNING: Before remembering it must be registered or learnt. Learning requires time. It has economical use of time in learning. The most efficient methods of learning or memorizing that would

yield the best results from the point of view of remembering effectively for a long time are as follows:

A. Rote Memorization: This is learning without understanding. Yet meaningful material is easily learnt than non sense material. It's easy to learn poetry than prose; prose is easy to learn than disconnected words. Disconnected words are easy to learn than nonsense words. Thus logical sequence is important, along with the systematic arrangement of ideas. However, mechanical learning must be avoided as it is less effective.

B. Spaced V/S Mass Learning: In spaced learning, the learner has been allowed some rest in memorization. The subject is not required to memorize the assignment in one continuous- time period. Intervals are provided. The principle of 'work & rest' is followed. In mass learning, the subject has to memorize the assigned material at one sitting without any interval or rest, until it is mastered. Shorter study periods are better for young pupils & slow learners. Spaced learning benefits pupils of lower classes, when motivation level is low or material is complex & difficult to understand. It is better to introduce periods of rest while studying. This helps in removing the monotony of long periods of study. Attention also does not flag and fatigue is avoided. Mass learning is effective when the pupils are very intelligent or are highly motivated. Although, both the methods of learning are found to be useful and effective in one situation or the other. In fact, success in the use of a particular method depends more on the abilities of the individual and the nature and range of the material to be memorized than on the method itself.

C. Whole verses Part method of learning: Let's take the example of a poem, when the poem is read again & again from start to finish; this is whole method of learning. This method can be adopted when the material is not very lengthy & when the material is logically arranged. Less time is used compared to part method. Here again the poem for example is broken down to parts or stanzas & then learnt, thus slow learners & average students are benefitted. The learner is motivated each time he masters the parts, thus the whole content is

slowly mastered. Even when the material is large & is not well organized, this method can be used.

D. Recitation: The best method of learning where by the student reads the lesson few times & then reviews the lesson without the book i.e. he recites the material learnt to him. Studies have shown that self recitation is better & time saving than just reading & rereading because permanent retention is achieved. Learner is able to detect his weakness & rectify them thus he knows his progress as well.

E. Mnemonic Devices: Grouping always helps to memorize easily, thus we learn poetry easily compared to prose, but many material come without such natural grouping. Thus artificial associations are made to associate the ideas or the material. Thus memory which is improved by use of artificial associates is called Mnemonics. Thus things are learnt verbatim without understanding it .e.g. VIBGYOR whose letters represent the colours of the rainbow.

2. RETENTION: The process of learning involves the stage of retention thus learning becomes permanent. 'Retention is the inactive state of learnt activity'. The learning activity leaves a mark on the brain structure. This mark is called a 'Memory Trace' which is imprinted on the Cerebral Cortex. This preservation of the memory trace in the brain is retaining of the learning activity. This can be compared to the traces or marks in the sand e.g. our footprints made on the sand. The deeper the trace, the longer the retention, the weak traces sl wly fades away.
Memory can be improved, but the depth of the trace or retention is difficult to improve by practice the reason being the traces that are made, depend on the genetic inheritance.

Retention however can be measured in three ways
a) Recall b) Recognition & c) Relearning.

a) **Recall Method:** A direct method of testing retention, where the capacity to recall & reproduce is tested. We can recall matter, only if we have retained it. e.g. in a writing a test: the pupil's retention & recall is tested. But sometimes we are not able to recall, even when we know the matter. So we cannot measure the retention. Therefore this is the poorest retention score of all that is learnt.

b) **Recognition Method**: This method is widely used now. A response given from which the pupil has to pick out the correct answer or recognize the correct answer. This ability of recognizing the correct answer helps measure the power of retention. This has a higher score of testing retention than recall method & also puts less strain on the child e.g. multiple choice questions, or questions based on a picture or map.

c) **Relearning Method**: Lets give an example ABC is learning a long poem & it takes him 20 minutes & 4 trials to memorize it. After a few days ABC again learns the poem & now in 10 minutes & two trials he learns it fully. Thus we can assume that retention has taken place because the time & the number of trials have reduced. Thus this method is the best compared to recognition & recall methods.

3. RECALL- The third aspect of memory is recall. We learn because we need to recall them at some point of time or other. So we can say that recall is the mental revival of past experiences. The least index of retention because we are unable to remember even though we know it. Recall depends on the mental condition & the memory trace formed.

4. RECOGNITION – Recall & recognition are closely related. Recall provides the material in memory, while recognition is the process of accepting or rejecting. Recognition is better than recall as an index of retention. Recognition starts with the object given whereas recalls find the object from the mind. Thus, when we meet a person, recognize that person's face, but may

not be able to recall his name. Recognition is more a passive behaviour than an active process like recall.

4.2.2.2 Nature of Memory

- Subject to change -not a fixed permanent record
- Memories files are "updated" with new info
- Memories are *reconstructed* in pieces during recall
- Memories depend on our attention, expectations, past experiences, how we're questioned
- Since memory is malleable (changeable), always question its accuracy.
- Accuracy of memory is only weakly correlated with confidence –can be very confident and still be wrong!
- For these reasons, eyewitness testimony is not reliable

4.2.3 Factors influencing Forgetting:-

1. Decay through disuse or Theory of Decay:

Forgetting is a process of fading of the learnt matter with passage of time. According to this view, the vivid impressions created in the cerebral cortex fade away as time passes. Such fading or decay could be the result of the normal metabolic processes of the brain. As time passes, these processes might cause the traces of material once learned to disintegrate gradually and eventually to disappear altogether.

2. Interference of Association or Theory of interference:

Here we see that forgetting is not caused just by fading away of traces, but by influence of the intervening activities.

a. **Retroactive interferences**: Here new learning works backward & interferes with old learning.

b. **Proactive Inhibition** or Interference: Here what we have learnt previously interferes with the new learning. Forgetting in our daily life is more due to proactive interference; our ability to recall what we have learnt is reduced by experiences previously learnt.

3. Theory of Repression or motivated forgetting

The two earlier theories are physiological process of affecting mental trace or interference in learning. But here the person is not given importance. For some people, forgetting is a psychological process, where by will the unpleasant or conflicting experiences are repressed & pushed into the unconscious & forgotten. Thus repression is done because it may cause anxiety to remember the experiences e.g. remembering loved ones whom we will never see again, we want to forget those people who hurt us.

4. Emotions: Rise in emotions like fear or anger or love lead to forget the learned experiences e.g. a student afraid of a teacher may forget what has been learnt.

5. Change of stimulus conditions: we may have learnt in a specific environment, but we forget in the changed environment e.g. we can say the speech well at home but in front of the audience, we are unable to speak.

6. Poor Health: this prevents us from remembering learnt material.

7. Defective mental state, fatigue, lack of interest or willingness all lead to forgetting

4.3 BEHAVIOUR

Behavioural psychology maintains that

(1) behaviour is both conditioned and determined by its own outcomes or consequences (rewards and punishments);

(2) human behaviour can be understood by investigating animal behaviour;

(3) only the observable and measurable aspects of a behaviour are worth investigating;

(4) repetition alone brings mastery which is the same as understanding;

(5) knowledge is something given by an instructor and taken (acquired) by a learner;

(6) an instructor should focus on changing the learner's behaviour and not his or her thinking patterns; and

(7) mind (and thus consciousness) does not exist as far as scientific investigation is concerned.

Relying on the work of the Russian Nobel laureate physiologist Ivan Petrovich Pavlov (1849-1936) with dogs, behavioural psychology was developed by the US psychologist John Broadus Watson (1878-1958), and established as the then mainstream psychology by the US researcher Burrhus Frederic Skinner (1904-1990). It held sway during 1920s to 1960s but was largely abandoned afterwards in favour of the radically different discipline of cognitive psychology. However, its basic tenet that what people do is the only dependable indicator of their future behaviour still holds as true as ever.

4.3.1 Types of Behaviours in Psychology

Psychology is actually study with regards to the mind, taking place partly through the study of behaviour. In scientific approach, psychology has got the immediate goal of knowing individuals and groups by each researching specific cases and forming general principles and for most it eventually aims to help society.

In this field, an expert researcher or practitioner is known as psychologist and could be classified like a behavioural scientist, cognitive scientist or social scientist. Psychologists try to understand the part of mental functions within social behaviour and individual, while additionally exploring the neurobiological and physiological processes which underlie certain cognitive behaviours and functions.

1. Passive Aggressive Behaviour

Passive aggressive behaviour comes in many forms however can usually manifest as a non-verbal aggression which evolved in negative behaviour. It is where one is angry with somebody but do not let them know. Rather than interacting honestly you feel annoyed, upset, disappointed or irritated, you may as an alternative bottle up the feelings, shut down verbally, make obvious modifications in behaviour, give angry looks, sulky, be obstructive, or put up a stone wall.

A passive aggressive may well not always show that a person is resentful or angry. He or she can be found in friendly, agreement, polite, down-to-earth, well-meaning and kind. But, underneath there might be manipulations happening - therefore the term is Passive Aggressive Behaviour.

Appropriate Behaviour

Description: Accomplishes desired and desired goals without trespassing on the needs and rights of others. This also includes suitable emotional responses.

Example: Keeps hale and hearty eating habits; Acquires satisfaction for a work done or problems solved without depreciating others.

Deficit Behaviour

Description: Non-existence of knowledge and skills needed for carrying out the behaviour.

Example: Active studying, note taking; passive responding in social circumstances

Excess Behaviour

Description: Too much of a Behaviour

Example: Consuming alcohol until passed out. Eats too much and Smoking.

Inappropriate Behaviour

Description: The behaviour takes place at a place or time which is inappropriate. If it happened under other situations then the inappropriate behaviour would be adequate.

Example: Exhibitionism or Bed-wetting

Maladaptive or Emotional Behaviour

Description: Skilled with performance however has a stronger than distinctive autonomic system response, frequently it is anxieties and fears.

Example: Test Anxiety; shyness

4.4 Factors Influencing Behaviour

There are a range of factors affecting people's behaviour.

In approximate order they are :

- Situation [Role] - The current situation the person is in. e.g. being in a prison vs. being at an office, a pool party or walking past a house on fire. Special mention should be given to 'normal' social situations and crisis situations.
- Environment [Resources] - Beyond just the situation, this is what resources someone has access to, e.g. if you can already hear the fire fighters sirens, if it is dark and the guards aren't looking, or if there are nice windows with trees to look out at when stressed.
- Habits [Triggered/Automatic Responses] - Habits are usually those things which you do without really thinking about anymore. BJ Fogg lists this as the Blue Path, doing a familiar behaviour from now on. An example might be brushing your teeth before you go to bed. At some point you had to learn the habit, but now you do the behaviour almost instinctively.

- History [Knowledge and experience] - How/Have you been trained to deal with the situation? Have you been in a similar situation, what did you do and did it work?

- Perspective [Time, Beliefs] - What is your Time Perspective (past positive/negative, present hedonistic, deterministic, future oriented, afterlife). What are your religious and moral beliefs? Do you align yourself to an emo, punk, hippy, military or some other stereotype? This is very similar to the cultural expectations, but regarding the specific sub-group to the general culture.

- Culture [Expectations] - What the general expectations are for a person in that situation and environment. If your sub-group hasn't specified what it's stance is, then what is generally considered morally justified? Stopping CPR on the random homeless guy on the street after 4mins might be seen as fine, whilst stopping CPR after 20mins on a child who's drowned in a pool might cause outrage.

- Emotions [Mood] - Was the person happy or sad at the time?

- Hormones [Emotional propensity] - If you are a teenage male you are likely to have a surge in testosterone which will amplify the likelihood of aggression (assuming the situation is one that involves violence or aggression). This can be thought of as shortening the 'fuse' so to speak. Pregnant women can be particularly susceptible to stress and may become even more irritable due to lack of food than normal... Drugs can also have a similar although usually more profound but short lived effect.

- Pre-natal [How birth affected you] - Humans are far more susceptible to conditioning during birth than most people realise. When your mother was pregnant with you, if she was heavily stressed then it can have negative consequences. If she was obese then you are more likely to be obese. A child after birth also needs the right amount of care and attention. They need to be held and touched and talked to.

- Genetics [Physical propensity] - There is barely a 0.5% difference in genetic material between humans and we are only 4-6% genetically different from apes. Our DNA is 90% similar to cats. Given such similarity it is generally said that genetics can cause a propensity for a particular behaviour or physical attribute, but it is the environment which has the most impact.

4.5 Behaviour Modification

There are many different methods and philosophies of dealing with "inappropriate," "abnormal," or "undesirable" behaviour. Behaviour modification is one of these. It is different from other methods and philosophies in that it focuses only on observable, describable, and measurable behaviours, as opposed, for example, to psychoanalytic theory which focuses on finding the underlying cause (i.e., childhood trauma) of behaviour .

Behaviour modification, based on behaviourist principles, operates on the following tenets:

1) Behaviour is controlled by antecedents, events which occur before a behaviour is exhibited, and

2) By consequences, that is, events which occur after a behaviour is exhibited.

3) These antecedents and consequences can be changed in order to increase or decrease the chance that a given behaviour will continue to be exhibited.

4) Behaviour, appropriate as well as inappropriate, is learned.

Aims of behaviour modification

Behaviour modification techniques aim to manipulate the antecedents and consequences of behaviour so that the likelihood of appropriate behaviour is increased and inappropriate behaviour is decreased. Proactive behaviour modification, interventions which avoid the utilization of aversive consequences, also involves teaching new and more appropriate skills (positive programming). The reason for this is the belief that all behaviour is

learned. If you are trying to reduce an inappropriate behaviour , an appropriate behaviour must be taught as an alternative.

Behaviour modification has been successfully used to treat anxiety, obsessive-compulsive disorder (OCD), enuresis (bed-wetting), among others. Some methods of behaviour modification require preparation and attention, where others are just common sense. Find out what you can do to shake your nasty habit today.

1. Positive Reinforcement

Behaviour is primarily encouraged by positive reinforcement. When a response is followed by something pleasant, it is called positive reinforcement. Positive reinforcement provides a favourable consequence that encourages repetition of behaviour. An employee for example, may find that when high quality work is done, the supervisor gives a reward of recognition since s/he likes recognition as a pleasant consequence, behaviour is reinforced and the employee tends to want to do high quality work again. The reinforcement always should be contingent on the employee correct behaviour. To improve job performance, the management must apply a program of positive reinforcements. The regular feedback and recognition give employees consequences that strongly influence their job behaviour. Positive reinforcement strengthens and increases behaviour by the presentation of a desirable consequences. It is an effective shaping tool of behaviour. It is so behaviour modification is considered to be a systematic and progressive application of positive reinforcements. It occurs, when more frequent or more powerful reinforcements are successively given as one comes closure to the desired behaviour. Even though the completely correct behaviour does not yet occur it is encouraged by giving positive reinforcement for behaviour in the desired direction. Shaping is especially useful for teaching a complex task.

2. Negative Reinforcement

When a response is followed by the termination or withdrawal of something unpleasant, it is called negative reinforcement. It is the removal of something undesirable in the situation. Negative reinforcement occurs when behaviour is

accompanied by removable of an unfavourable consequence. It is not same as punishment which normally adds something unfavourable/ unpleasant in the situation. Negative reinforcement strengthens and increases behaviour by the termination or withdrawal of an undesirable consequence. As the law of effect professed, behaviour responsible for the removal of something unfavourable state is again encouraged. An example of negative reinforcement is the experience of a jet aircraft mechanic who learned that if s/he wore noise suppressors over his/her ears, s/he could prevent discomfort from the jet engine noise. This reinforcement encouraged her/him to wear the proper noise equipment reinforcements. Also individual who is punished may be unclear about what specific part of his/her behaviour is being punished. And it is possible that some desirable behaviour may be accidentally discourage

3. Punishment

One of the toughest things we can do as adults is to punish ourselves. Punishment is a form of behaviour modification that discourages the unwanted act by application of an unpleasant stimulus in reaction to the behaviour.

4. Emotional Freedom Technique (EFT)

Also known as Meridian Tapping, EFT is based on the premise that negative emotions or behaviour stem from short circuits in the body's energy system. These techniques are done by drumming on certain areas on the body to balance and release the short circuit.

5. Neuro-Linguistic Programming (NLP)

The NLP technique is a study of communication; how we communicate with others and ourselves, and how that affects the way we react and behave. This communication can be altered through submodalities, metaprograms, etc. to change a behaviour .

6. Meditation

Meditation has been used for centuries to help the brain make physiological changes for the better. Not only does it improve brain function and memory, it enables "whole brain synchronization", a process that allows the left brain portion to interact and be in focus with the right brain hemisphere. Meditation

is one of the best behaviour modification systems in existence. It alleviates anxiety and depression, causing a remarkable improvement in a person's sense of well-being.

7. Don't Give it Attention

You can modify behaviour through ignoring the act. By ignoring the behaviour you will often reduce its tendency for appearing again. Don't give someone attention who is engaging in a behaviour that needs stopped.

8. Cognitive Behavioural Therapy (CBT)

CBT is a psychotherapeutic approach that addresses maladaptive behaviours through a number of goal-oriented systematic procedures. The common hallmarks of CBT are the focus on the "here and now", a structuring of the sessions and path, a guidance role by the therapist, and on alleviating both the patient's vulnerability and worrisome symptoms.

4.6 Let us sum up

- Memory refers to the ability to store and retrieve information over time.
- For some things our memory is very good, but our active cognitive processing of information assures that memory is never an exact replica of what we have experienced.
- Explicit memory refers to experiences that can be intentionally and consciously remembered, and it is measured using recall, recognition, and relearning. Explicit memory includes episodic and semantic memories.
- Implicit memory refers to the influence of experience on behaviour, even if the individual is not aware of those influences. The three types of implicit memory are procedural memory, classical conditioning, and priming.

- The capacity of long-term memory is large, and there is no known limit to what we can remember.
- Behaviour modification is the deliberate and systematic use of conditioning to modify behaviour.
- Reinforcement may be either partial or continuous.
- B. F. Skinner expanded on Thorndike's ideas to develop a set of principles to explain operant conditioning.

4.7 Lesson-End activities

- This activity requires 5 to 10 minutes, depending on the length of discussion, and should be conducted at the start of the class period. Begin by asking students to write down everything they did yesterday that did NOT involve memory. If students appear stumped, assure them that they did engage in a number of activities that did not involve memory. After having students consider this question for 3–4 minutes, ask students to provide some responses.

- Consider the reinforcement techniques that you might use to train a dog to catch and retrieve a Frisbee that you throw to it.

4.8 Model Questions

1. Explain the components of memoiy.
2. What are the different types of memories?
3. Enumerate with examples, the different ways in the process of memorizing.
4. What are the different ways of measuring recall?
5. Differentiate between recall and recognition.
6. What is maladaptive behaviour?
7. Mention any five behaviour modification techniques.

4.9 Check your progress

1 Match the type of memory with its definition:

A	B
1. Long-term memory	a. holds information 15 to25 seconds
2 Short-term memory	b. stores information on a relatively permanent basis
3. Sensory memory	c. direct representation of a stimulus

2. There appear to be two types of declarative memory:
___________memory for knowledge and facts and
_________________memory for personal experiences.

3. Expand NLP and CBT

Answers : 1) 1-b 2-a 3c- 2) Episodic memory, Semantic memory 3) Neuro-Linguistic Programming , Cognitive Behavioural Therapy

4.10 Suggested Reading

1. Baddeley, A.D. (1986). *Working Memory*. Oxford: Clarendon Press.

2. Tulving, E. & Craik, F.I.M. (2000). *Handbook of Memory*. Oxford: Oxford University Press.

3. Bandura, A., 1977. Social Learning Theory. Prentice Hall, Englewood Cliffs, NJ.

Unit – V

PLAN OF THE STUDY

5.0 Aims and Objectives
5.1 Introduction
5.2 Meaning of Intelligence
5 2.1 Definition
5.2.2 Theories of intelligence
5.2.3 Other Intelligence
5.3 Motivation
5.4 Frustration
5.5 Defence Mechanism
5.6 Let us sum up
5.7 Lesson-End activities
5.8 Model Questions
5.9 Check your progress
5.10 Suggested Reading

5.0 Aims and Objectives

In this Unit the concept of intelligence, motivation, frustration and defence mechanism will be discussed. After going through this lesson you will be able to

- Understand the need and importance of intelligence
- explain the meaning of motivation,
- differentiate between intrinsic and extrinsic motivation;
- describe conflict and frustration
- Skilfully apply defence mechanisms.

5.1 Introduction

Intelligence is important because it has an impact on many human behaviours. Intelligence is more strongly related than any other individual difference variable to successful educational, occupational, economic, and social outcomes. Scores on intelligence tests predict academic and military performance, as well as success in a wide variety of jobs. But this aspect is highly debated and questioned by modern thinkers and sociologist. Inspite of all its criticism, intelligence remains a most key factor in deciding the success of an individual.

5.2 Meaning of intelligence

While intelligence is one of the most talked about subjects within psychology, there is no standard definition of what exactly constitutes 'intelligence.' Some researchers have suggested that intelligence is a single, general ability, while other believe that intelligence encompasses a range of aptitudes, skills and talents.

5.2.1 Definition

- **American Psychological Association** - "Individuals differ from one another in their ability to understand complex ideas, to adapt effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought."

- **F. N. Freeman** - "Sensory capacity, capacity for perceptual recognition, quickness, range or flexibility or association, facility and imagination, span of attention, quickness or alertness in response."

Much of the excitement among investigators in the field of intelligence derives from their attempts to determine exactly what intelligence is. Different investigators have emphasized different aspects of intelligence in their definitions

More recently, however, psychologists have generally agreed that adaptation to the environment is the key to understanding both what intelligence is and what it does. Such adaptation may occur in a variety of settings: a student in school learns the material he needs to know in order to do well in a course; a physician treating a patient with unfamiliar symptoms learns about the underlying disease; or an artist reworks a painting to convey a more coherent impression. For the most part, adaptation involves making a change in oneself in order to cope more effectively with the environment, but it can also mean changing the environment or finding an entirely new one

5.2.2 Theories of intelligence

1. Charles Spearman - General Intelligence:

British psychologist Charles Spearman (1863-1945) described a concept he referred to as general intelligence, or the *g factor*. After using a technique known as factor analysis to examine a number of mental aptitude tests, Spearman concluded that scores on these tests were remarkably similar. People who performed well on one cognitive test tended to perform well on other tests, while those who scored badly on one test tended to score badly on others. He concluded that intelligence is general cognitive ability that could be measured and numerically expressed.

2. Louis L. Thurstone - Primary Mental Abilities:

Psychologist Louis L. Thurstone (1887-1955) offered a differing theory of intelligence. Instead of viewing intelligence as a single, general ability, Thurston's theory focused on seven different "primary mental abilities.' The abilities that he described were:

- Verbal comprehension
- Reasoning

- Perceptual
- Numerical ability
- Word fluency
- Associative memory
- Spatial visualization

3. Howard Gardner - Multiple Intelligences:

One of the more recent ideas to emerge is Howard Gardner's theory of multiple intelligences. Instead of focusing on the analysis of test scores, Gardner proposed that numerical expressions of human intelligence are not a full and accurate depiction of people's abilities. His theory describes eight distinct intelligences that are based on skills and abilities that are valued within different cultures.

The eight intelligences Gardner described are:

1. Spatial - The ability to conceptualize and manipulate large-scale spatial arrays (for example, an airplane pilot or sailor), or more local forms of space (for example, an architect or chess player).

2. Bodily-kinesthetic - The ability to use one's whole body, or parts of the body (like the hands or the mouth), to solve problems or create products (for example, a dancer).

3. Musical - Sensitivity to rhythm, pitch, meter, tone, melody and timbre. May entail the ability to sing, play musical instruments, and/or compose music (for example, a musical conductor).

4. Linguistic - Sensitivity to the meaning of words, the order among words, and the sound, rhythms, inflections, and meter of words (for example, a poet).

5. Logical-mathematical - The capacity to conceptualize the logical relations among actions or symbols (for example, a mathematician or scientist). Famed

psychologist Jean Piaget believed he was studying the range of intelligences, but he was actually studying logical-mathematical intelligence.

6. Interpersonal - The ability to interact effectively with others. Sensitivity to others' moods, feelings, temperaments and motivations (for example, a negotiator).

7. Intrapersonal - Sensitivity to one's own feelings, goals, and anxieties, and the capacity to plan and act in light of one's own traits. Intrapersonal intelligence is not particular to specific careers; rather, it is a goal for every individual in a complex modern society, where one has to make consequential decisions for oneself.

8. Naturalistic - The ability to make consequential distinctions in the world of nature as, for example, between one plant and another, or one cloud formation and another (for example, a taxonomist).

4. Sternberg - Triarchic Theory of Intelligence:

Psychologist Robert Sternberg defined intelligence as "mental activity directed toward purposive adaptation to, selection and shaping of, real-world environments relevant to ones life." While he agreed with Gardner that intelligence is much broader than a single, general ability, he instead suggested some of Gardner's intelligences are better viewed as individual talents.

Sternberg proposed what he refers to as 'successful intelligence,' which is comprised of three different factors:

- **Analytical intelligence:** This component refers to problem-solving abilities.
- **Creative intelligence:** This aspect of intelligence involves the ability to deal with new situations using past experiences and current skills.

Practical intelligence: This element refers to the ability to adapt to a changing environment.

5.2.3. Types of Intelligence Test

The general intelligence tests have been classified into three groups. Individual, group and performance tests.

1. Individual Test:

The individual intelligence test is administered to only one individual at a time. A trained psychologist is expected to administer the test for a definite period of time and interpret the result. These tests cover age group from 2 years to 18 years. These are (i) The Binet Simon tests, (ii) Revised tests by Terman, (iii) Mental scholastic tests of Burt and (d) Weschler test.

2. Group Test:

The group intelligence tests are meant for assessing the intelligence of a large number of individuals in one sitting. There are two kinds of group intelligence tests verbal and non verbal.

Verbal:

The verbal group test requires an individual to read out certain problems and write out solutions of these problems.

Non-Verbal:

The non-verbal group tests present similar problems as the verbal test but in a different way. The problems are presented in the form of pictures, diagrams, puzzles and mazes. If does not require the individual to read or write, but only to be able to make a mark with a pencil.

3. Performance Test

Performance tests are designed to test problem solving ability using certain objects such as pictures and blocks, instead of words. These tests are especially useful with young children, illiterates, persons with speech defects and persons who do not have proficiency in language. Some of the famous

tests are (i) Koh's Block design test (ii) The cube construction tests and (iii) The Pass Along tests.

Intelligent quotient:

The intelligent quotient represents the degree of brightness possessed by an individual. When the mental age (MA) is divided by the chronological age (CA) and the quotient is multiplied by 100 the result is I. Q. So the formula of finding out I. Q is.

I. Q. = MA / CA x 100

The fraction is multiplied by 100 in order to remove the decimal point and to give the I. Q. a value of 100 when mental age is equal with chronological age.

Chronological Age: (C. A.)

Chronological age is nothing but the actual calendar age of the child. The real age of the child in mental into consideration for test is called chronological age.

Mental Age: (M.A)

In categorizing children of different abilities Binet developed a scale of units he called mental age. A Child's intelligence was determined by the mental age level which he could attain on the test.

I. Q. Range	Classification	Percentage of populations
140 and above	Very superior	1 5
129 -139	Super or	11
110 – 119	High - Average	18
90 – 109	Average	47
80 – 89	Low Average	14
70 – 79	Border ne defective	6
Below 70	Mentally defective	2 5

5.2.4 Other Intelligence

1. Emotional intelligence (EI)

Emotional intelligence (EI) is the ability to recognize one's own and other people's emotions, to discriminate between different feelings and label them appropriately, and to use emotional information to guide thinking and behaviour.

There are three models of EI.

1. The ability model, developed by Peter Salovey and John Mayer, focuses on the individual's ability to process emotional information and use it to navigate the social environment.
2. The trait model as developed by Konstantin Vasıly Petrides, "encompasses behavioural dispositions and self perceived abilities and is measured through self report".
3. The final model, the mixed model is a combination of both ability and trait EI. It defines EI as an array of skills and characteristics that drive leadership performance, as proposed by Daniel Goleman.

The Four Branches of Emotional Intelligence

Salovey and Mayer proposed a model that identified four different factors of emotional intelligence: the perception of emotion, the ability reason using emotions, the ability to understand emotion and the ability to manage emotions.

1. Perceiving Emotions: The first step in understanding emotions is to accurately perceive them. In many cases, this might involve understanding nonverbal signals such as body language and facial expressions.
2. Reasoning with Emotions: The next step involves using emotions to promote thinking and cognitive activity. Emotions help prioritize what we pay attention and react to; we respond emotionally to things that garner our attention.

3. Understanding Emotions: The emotions that we perceive can carry a wide variety of meanings. If someone is expressing angry emotions, the observer must interpret the cause of their anger and what it might mean. For example, if your boss is acting angry, it might mean that he is dissatisfied with your work; or it could be because he got a speeding ticket on his way to work that morning or that he's been fighting with his wife.

4. Managing Emotions: The ability to manage emotions effectively is a key part of emotional intelligence. Regulating emotions, responding appropriately and responding to the emotions of others are all important aspect of emotional management.

5.3 Motivation

5.3.1 Definition:

Motivation is defined as the process that initiates, guides, and maintains goal-oriented behaviours. Motivation is what causes us to act, whether it is getting a glass of water to reduce thirst or reading a book to gain knowledge.

It involves the biological, emotional, social, and cognitive forces that activate behaviour. In everyday usage, the term *motivation* is frequently used to describe *why* a person does something.

- internal state or condition that activates behaviour and gives it direction;
- desire or want that energizes and directs goal-oriented behaviour;
- influence of needs and desires on the intensity and direction of behaviour.

Franken (2006) provides an additional component in his definition:

- the arousal, direction, and persistence of behaviour.

While still not widespread in terms of introductory psychology textbooks, many researchers are now beginning to acknowledge that the factors that energize behaviour are likely different from the factors that provide for its persistence.

5.3.2 Importance of motivation

Most motivation theorists assume that motivation is involved in the performance of all learned responses; that is, a learned behaviour will not occur unless it is energized. The major question among psychologists, in general, is whether motivation is a primary or secondary influence on behaviour. That is, are changes in behaviour better explained by principles of environmental/ecological influences, perception, memory, cognitive development, emotion, explanatory style, or personality or are concepts unique to motivation more pertinent.

5.3.3The relationship of motivation and emotion

Emotion (an indefinite subjective sensation experienced as a state of arousal) is different from motivation in that there is not necessarily a goal orientation affiliated with it. Emotions occur as a result of an interaction between perception of environmental stimuli, neural/hormonal responses to these perceptions (often labelled feelings), and subjective cognitive labelling of these feelings. Evidence suggests there is a small core of core emotions that are uniquely associated with a specific facial expression. This implies that there are a small number of unique biological responses that are genetically hard-wired to specific facial expressions. A further implication is that the process works in reverse: if you are motivated to change how you feel and your feeling is associated with a specific facial expression, you can change that feeling by purposively changing your facial expression. As most people would rather feel happy than otherwise, the most appropriate facial expression would be a smile. Explanations of influences/causes of arousal and direction may be different from explanations of persistence

In general, explanations regarding the source(s) of motivation can be categorized as either extrinsic (outside the person) or intrinsic (internal to the person).

5.3.4 Intrinsic Motivation

Intrinsic motivation means that the individual's motivational stimuli are coming from within. The individual has the desire to perform a specific task, because its results are in accordance with his belief system or fulfills a desire and therefore importance is attached to it.

Our deep-rooted desires have the highest motivational power. Below are some examples:

- Acceptance: We all need to feel that we, as well as our decisions, are accepted by our co-workers.
- Curiosity: We all have the desire to be in the know.
- Honour: We all need to respect the rules and to be ethical.
- Independence: We all need to feel we are unique.
- Order: We all need to be organized.
- Power: We all have the desire to be able to have influence.
- Social contact: We all need to have some social interactions.
- Social Status: We all have the desire to feel important.

5.3.5 Extrinsic Motivation

Extrinsic motivation means that the individual's motivational stimuli are coming from outside. In other words, our desires to perform a task are controlled by an outside source. Note that even though the stimuli are coming from outside, the result of performing the task will still be rewarding for the individual performing the task.

Extrinsic motivation is external in nature. The most well-known and the most debated motivation is money. Below are some other examples:

- Employee of the month award
- Benefit package
- Bonuses
- Organized activities

5.3.6 Key concepts of motivation

There are certain terms which you will commonly come across when you learn this lesson on motivation such as needs, goals, incentives etc. Let us understand some of these concepts.

a) Needs and Motives

A need is a condition of lack or deficit of something required by the organism. In order to maintain homeostasis or balance the organism finds it necessary to satisfy the needs.

The needs are of different types. The need for food or water is a physiological need, which arises out of lack or deficit of food or water in the organism. The needs for excretion and urination are also physiological needs. They are due to the organism's necessity to eliminate waste matter from the body. The need for contact with other persons is a social need. The other social needs include need for prestige, status, affection, self-esteem, and so on. A person becomes more aware of his needs when they are not fulfilled. In other words, when you are hungry, you need food, and, when you are thirsty you need water. In these cases you are in a state of deprivation and your bodily system suffers from some kind of imbalance.

The needs may be broadly categorised as, **primary or physiological needs** and **secondary or social needs**. Needs for food, water, sex, sleep and rest, and elimination are primary needs. Needs for achievement, affiliation, power are examples of social needs. The term 'motive' refers to goal directed behaviour and energising conditions **decreases** within the organism that drives behaviour. It is generally used to refer to certain conditions which, besides

arousing, predispose a person to respond, or behave in a way appropriate to that motive. Motives direct the activity of the individual towards person's goals.

Psychologists have divided motives into three types—Biological motives, social motives and personal motives!

The goal here may be fulfillment of a want or a need. Whenever a need arises the organism is driven to fulfil that want or need. If there is no need in the organism, there will be no behaviour. For example, Horse and water. Horse does not drink water unless it has thirst or if it is not motivated. Unlike the external stimuli, the motives are limited.

They do not allow us to stop our action or behaviour until the need is satisfied. Hence, they are called the 'dynamos' of behaviour.

I) Physiological Motives:	II) Social Motives:	III) Personal Motives:
a. Hunger motive: b. Thirst motive: c. Need for oxygen: d. Motive for regulation of body temperature: e. Need for sleep: f. Need for avoidance of pain: g. Drive for elimination of waste: h. Sex motive: i. Maternal drive:	a. Achievement motive: b. Aggressive motive: c. Power motive: d. Acquisitive motive: e. Curiosity motive: f. Gregariousness:	a. Force of habits: b. Goals of life: c. Levels of aspirations: d. Attitudes and interests:

Unconscious motivation: These motives or desires which are repressed by our conscious remain in our unconscious and will be influencing our behaviour. Our irrational behaviour, the slip of tongue, slip of pen, amnesia,

multiple personality, somnambulism, etc., are some examples of such behaviours for which we do not have answers apparently.

(b) Goals

Thinking about the goal motivates a person to organize his or her action. If hunger is a need, eating food is a goal. Thus goal is related to the need state. However, in certain cases, behaviour is also guided by intrinsic goals. It means behaviour does not always need external goal. It may be satisfying and enjoyable in itself. Some people may like to sing, dance or play just for the sake of singing, dancing or playing. They like such activities. Thus goals can be intrinsic or extrinsic.

(c) Incentives

Incentives refer to the goal objects which satisfy the needs. Incentives vary in quality and quantity which make them less or more satisfying and attractive. Thus one can put in greater amount of effort to attain a more attractive incentive. As a matter of fact many incentives assume considerable significance in the lives of people and they do every thing possible to attain those incentives.

(d) Instincts

Instinct is an old concept in the field of motivation. It is defined as an innate biological force that predisposes the organism to act in a certain way. At one time all behaviours were supposed to be results of certain instincts. Some of the instincts identified by early psychologists are fight, repulsion, curiosity, self abasement, acquisition etc. It was thought that instincts were inherited and compelling sources of conduct, but can be modified by learning and experience. This term is no more used in relation to human behaviour. Animal behaviour is sometimes explained using this term. In current usage 'instinct' is reserved for innate response tendencies found among animals.

5.3.7 Theories of Motivation

In the 1950s three specific theories were formulated and are the best known: hierarchy of needs theory, Theories X and Y, and the two-factor theory. These early theories are important to understand because they represent a foundation from which contemporary theories have grown. Practicing managers still regularly use these theories and their terminology in explaining employee motivation.

1. Hierarchy of Needs Theory

1. Abraham Maslow's hierarchy of needs is the most well-known theory of motivation. He hypothesized that within every human being there exists a hierarchy of five needs:

- Physiological: Includes hunger, thirst, shelter, sex, and other bodily needs
- Safety: Includes security and protection from physical and emotional harm
- Social: Includes affection, belongingness, acceptance, and friendship
- Esteem: Includes internal esteem factors such as self-respect, autonomy, and achievement; and external esteem factors such as status, recognition, and attention
- Self-actualization: The drive to become what one is capable of becoming; includes growth, achieving one's potential, and self-fulfillment

As a need becomes substantially satisfied. the next need becomes dominant. No need is ever fully gratified; a substantially satisfied need no longer motivates.

Maslow separated the five needs into higher and lower orders.

- Physiological and safety needs are described as lower-order.

- Social, esteem, and self-actualization are as higher-order needs
- Higher-order needs are satisfied internally.
- Lower-order needs are predominantly satisfied externally.

Maslow's need theory has received wide recognition, particularly among practicing managers. Research does not generally validate the theory.

2. Theory X and Theory Y

Douglas McGregor concluded that a manager's view of the nature of human beings is based on a certain grouping of assumptions and he or she tends to mould his or her behaviour toward employees according to these assumptions.

Theory X assumptions are basically negative.

- Employees inherently dislike work and, whenever possible, will attempt to avoid it.
- Since employees dislike work, they must be coerced, controlled, or threatened with punishment.
- Employees will avoid responsibilities and seek formal direction whenever possible.
- Most workers place security above all other factors and will display little ambition.

3. Two-Factor Theory

The Two-Factor Theory is sometimes also called motivation-hygiene theory. Proposed by psychologist Frederick Herzberg when he investigated the question, "What do people want from their jobs?" He asked people to describe, in detail, situations in which they felt exceptionally good or bad about their jobs. These responses were then tabulated and categorized.

From the categorized responses, Herzberg concluded:

- Intrinsic factors, such as advancement, recognition, responsibility. and achievement seem to be related to job satisfaction.
- Dissatisfied respondents tended to c'te extrinsic factors, such as supervision, pay, company policies, and working conditions.
- The opposite of satisfaction is not dissatisfaction.
- Removing dissatisfying characteristics from a job does not necessarily make the job satisfying.

Job satisfaction factors are separate and distinct from job dissatisfaction factors. Managers who eliminate job dissatisfaction factors may not necessarily bring about motivation. When hygiene factors are adequate, people will not be dissatisfied; neither will they be satisfied. To motivate people, emphasize factors intrinsically rewarding that are associated with the work itself or to outcomes directly derived from it.

5.4 Frustration

5.4.1 Meaning of Frustration

Frustration is one of the causes of stress. It arises when one's motivation to achieve a desired goal is blocked. For example, an employee wants to finish a report before the end of the day but finds that something or the others keep interrupting him at work. This can lead to his frustration.

In psychology, frustration is an emotional state, with a variety of causes:

- Instinctive behaviour has been prevented from expression, or
- drives have been increased through inactivity, or
- Expectations have not been met.

Frustration is a common emotional response to opposition and is the antithesis of satisfaction.

Related to anger and disappointment, it arises from the perceived resistance to the fulfillment of individual will. The greater the obstruction, and the greater the will, the more the frustration is likely to be.

Generally there are three main sources of frustration. These are as follows:
(i) **Environmental Forces:** The environmental factors can frustrate the satisfaction of motives. The obstacle may be physical such as lack of money or a road block. They may be social. For instance, yours parents, teachers or classmates may prevent you from doing something what you want to do.

(ii) **Personal Factors or Limitations:** They make goals unattainable and produce frustration. The personal inadequacy may be either physical or psychological. The personal characteristics of individual like personality or intelligence affect performance. The limitations of ability frustrate individuals because they do not let him or her to achieve very high goals. At times we have conflicting goals which create frustration.

(iii) **Conflict** : A conflict is a situation in which an individual is required to act in two or more incompatible ways to achieve two or more exclusive goals. It occurs when an individual is unable to choose between two or more goals. When one has competing goals that interfere with one another, it can create cognitive dissonance.

In some areas of psychology (especially in psychodynamic theory), psychologists talk about "defense mechanisms," or manners in which we behave or think in certain ways to better protect or "defend" ourselves. Defense mechanisms are one way of looking at how people distance themselves from a full awareness of unpleasant thoughts, feelings and behaviours.

5.6 Defense mechanisms

Psychologists have categorized defense mechanisms based upon how primitive they are. The more primitive a defense mechanism, the less effective

it works for a person over the long-term. However, more primitive defense mechanisms are usually very effective short-term, and hence are favoured by many people and children especially (when such primitive defense mechanisms are first learned). Adults who don't learn better ways of coping with stress or traumatic events in their lives will often resort to such primitive defense mechanisms as well.

Most defense mechanisms are fairly unconscious – that means most of us don't realize we're using them in the moment. Some types of psychotherapy can help a person become aware of what defense mechanisms they are using, how effective they are, and how to use less primitive and more effective mechanisms in the future.

Although defense mechanisms serve a useful protective function, they usually involve some measure of self-deception and reality distortion, and may seriously interfere with the effective resolution of the actual problem. Ego defense-mechanisms are considered to be maladaptive when they become the predominant means of coping with stressors.

Defense mechanisms are learned, usually during early childhood. They are developed to deal with inner hurt, pain, anger, anxiety, sadness and self-devaluation. They operate on relatively automatic and habitual levels, or, put another way, ego-defense mechanisms are ***unconscious*** and ***automatic.***

- **Denial of Reality:** Protecting self from unpleasant reality by refusal to perceive it or face it.
- **Fantasy:** Gratifying frustrated desires by imaginary achievements.
- **Repression:** Preventing painful or dangerous thoughts from entering consciousness.
- **Rationalization:** Attempting to prove that one's behaviour is 'rational' and justifiable and thus worthy of self and social approval.
- **Projection:** Placing blame for difficulties upon others or attributing one's own unethical desires to others.

- **Reaction Formation:** Preventing dangerous desires from being expressed by adopting exaggerated opposed attitudes and types of behaviour and using them as 'barriers'.
- **Displacement:** Discharging pent-up feelings, usually hostility, on objects less dangerous than those which initially aroused the emotion.
- **Emotional Insulation:** Reducing ego involvement and withdrawing into passivity to protect self from hurt.
- **Intellectualization:** Cutting off affective charge from hurtful situations or separating incompatible attitudes by logic-tight compartments.
- **Undoing:** Atoning for and thus counteracting immoral desires or acts.
- **Regression:** Retreating to earlier developmental level involving less mature responses and usually a lower level of aspiration.
- **Identification:** Increasing feelings of worth by identifying self with a person or institution of illustrious standing.
- **Introjection:** Incorporating external values and standards into ego structure so individual is not at their mercy as external threats.
- **Compensation:** Covering up weakness by emphasizing desirable trait or making up for frustration in one area by over-gratification in another.

5.6 Let us sum up

- Intelligence is an aggregate or the capacity of the individual to think rationally, act purposefully, and deal; effectively with the environment
- Chronological age is nothing but the actual calendar age of the child. The real age of the child in mental into consideration for test is called chronological age.
- Intelligence is influenced by biopsychosocial factors.
- Motivation refers to the driving and pulling forces which result in persistent behaviour directed towards a goal.
- The primary needs such as hunger, thirst and sex, have their origin in the physiological state of the body

- Socio-psychogenic motives such as need for power, affiliation, achievement and approval are learnt motives and involve other people.
- Intrinsic motives are those activities for which there is no apparent reward but one gets enjoyment and satisfaction in doing these activities.
- Competence is an intrinsic motivation.
- Freud proposed that we use defense mechanisms to cope with anxiety and to maintain a positive self-image

5.7 Lesson-End activities

- Compare between the human and computer intelligence
- List out the common defence mechanism which you often use.

5.8 Model Questions

1. Explain the meaning and nature of intelligence.
2. What is emotional intelligence?
3. Explain the different types of intelligence tests with examples.
4. Explain the basic concepts of motivation
5. Mention any five defense mechanisms.

5.9 Check your progress

1. Intelligence quotient (IQ) calculated by:

   a- IQ = (mental age/ chronological age x100)

   b- IQ = (mental age/ chronological age x200)

   c- IQ = (mental age/ chronological age x300)

   d- IQ = (mental age/ chronological age x400)

2 .The Need Achievement Theory of Motivation was postulated by ....

a) Abraham Maslow

b) David McClelland

c) Ivan Pavlov

d) Albert Bandura

3. ___________is preventing dangerous desires from being expressed by adopting exaggerated opposed attitudes and types of behaviour and using them as 'barriers'.

4. ________ is discharging pent-up feelings, usually hostility, on objects less dangerous than those which initially aroused the emotion.

Answers: 1.a 2. a 3. Reaction Formation 4. Displacement

5.10 Suggested Reading

1. Gardner, H. (1983). Frames of mind: The theory of multiple intelligences. New York: Basic Books.

2. Deci, E. and Ryan, R. (1985) Intrinsic Motivation and Self-Determination in Human Behaviour (New York: Plenum Press).

3. Atkinson, J.W. (1964). An introduction to motivation. Princeton: Van Nostrand

4. Freud, A. (1937).*The ego and the mechanisms of defense*. London: Hogarth.